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agageegegg gecetttgea getgegattt tegeectaeg tttteaaegg aggtaetata 120
ctggcaattg ctggagaaga ttttgcaatt gttgcttctg atactcgatt gagtgaaggg 180
ttttcaattc atacgcggga tagccccaaa tgttgncnna ntaacagaca aaacagtcat 240
tggatgcagc ggttttcatg gagactgtct tacgctgaca aagattattg aagcaagact 300
aaagatgtat aagcattcca ataataaggc entgactacg gggggcaatg etggcangen 360
gtnctacan
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tetgegtete ttttteegtg agagetatee etteaceaeg gaggaaagte tateteteae 180
aaattccggg actggtaaac atggcgctgt acgtttcgcc gattgtttcc ggtgaaggtt 240
atcoogttno cotggoggnt tocacctntg aatttaaggo cgggataatg tonaagcoog 300
aagcatgnaa gtg
<210> 376
<211> 375
<212> DNA
<213> Homo sapiens .
<400> 376
cgggttccgg tgaccacgaa ggcggcaaag gcgacggaat ggaggaggtg cctcacgact 60
gtccaggggc cgacagcgcc caggcgggca gaggggcttc atgtcaggga tgccccaacc 120
agcggctgtg cgcttctgga gcgggggcca ctccggacac ggctatagag gaaatcaaag 180
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agaaaatgaa gactgtaaaa cacaaaatct tggtattgtc tgggaaaggc ggtgttggga 240
aaagcacatt cagcgcccac cttgcccatg gcctagcaga ggatgaaaac acacagattg 300
ctcttctaga catcgatata tgtgggccat cgattcccaa gataatggga ttggaaggag 360
agcaggttca ccaga
                                                                   375
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<222> (265)

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tgaagtgcac acagacacca acaagnttgc ngaatttctg nangcagtgc tgtgccctcc 180
caggtaccc aanctggcag ctctgaaccc tnantccaac acagctgngc tgganatatt 240
tgncaaattn tctgcctaca tnnnnanttc aaacccagna ctcaatgaca atctggagaa 300
nggactcctg aaagccctgn acgttttagn caattantta acatccccc nctcagaaga 360
agtggatgan accagtgctg nagtgaaggt gtctctcaga agaagtttnt ggatagcacg 420
agctcaccct gggg
<210> 378
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<212> DNA
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<222> (294)
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<222> (421)
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<222> (443)
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<221> misc feature
<222> (472)
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<222> (496)
<223> n equals a,t,g, or c
<220>
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tatgcgactt accgcagcaa aaataaaggg aaagataagc gctcaataaa cctgtctgtt 120
ttccttaatt ctntgctggc tgataatcat cacctgcagg ttggctccaa ttatttgtat 180
attcataaaa tcgatggaaa aacttttctc tttaccaaaa caaatgacaa gagtctggtt 240
cagaagataa atcgctctaa agcttcagtt gaagatatta agaacagcct cgtngatgac 300
ggaatcattg ggattcccat cttttttgtt tgttgaaggc gacaccattg gtttttgcca 360
gaactgnttt tcgggncggc cacatncgnt tttgacaggt ttttttaatc ggggaaggga 420
ntgtccttaa ggcgtggggn gengttcagt tggggccctg ttggggggac enccaaggng 480
gtggttatgg cnnggntttc atnggc
                                                                   506
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<222> (9)
<223> n equals a,t,g, or c
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ctagaactag tggatccccc gggctgcagg aattcggcac gaggccatcc agactgagga 120
agacceggaa acttagggge caegtgagee aeggeeaegg eegeatagge aageaeegga 180
agcaccccgg cggccgcggt aatgctggtg gtctgcatca ccaccggatc aacttcgaca 240
aataccaccc aggctacttt gggaaagttg gtatgaagca ttaccactta aagaggaacc 300
agagettetg eccaactgte aacettgaca aattgtggae tttggteagt gaacagacae 360
gggtgaatgc tgctaaaaac aagactgggg ctgctcccat cattgatgtg gtgcgatcgg 420
gctactataa agttctggga aagggaaagc tcccaaagca gcctgtcatc gtgaaggcca 480
aattetteag cagaagaget gaggagaaga ttaagagtgt tggggggce tgtgteetgg 540
tggcttgaag
                                                                   550
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<211> 573
<212> DNA
<213> Homo sapiens
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<221> misc feature
<222> (6)
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<222> (10)
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<221> misc feature
<222> (160)
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aagncnagan agccaaccct cactaaaggg aacaaaagct ggagctccac cgcggtgcgg 60
ccgctctaga actagtggat cccccgggct gcaggaattc ggcacgagcg caaagaaggg 120
tggcgagaag aaaaagggcc gttctgccat caacgaaggn taacccgaga atacaccatc 180
aacattcaca agcgcatcca tggagtgggc ttcaagaagc gtgcacctcg ggcactcaaa 240
gagattcgga aatttgccat gaaggagatg ggaactccag atgtgcgcat tgacaccagg 300
ctcaacaaag ctgtctgggc caaaggaata aggaatgtgc cataccgaat ccgtgtgcgg 360
ctgtccagaa aacgtaatga ggatgaagat tcaccaaata agctatatac tttggttacc 420
tatgtacctg ttaccacttt caaaatttct gtgctaaaca gtgttacagt cgccaagagc 480
ccataaaggg agccctcctg gaagtggatg aggccttggg tctcggctct tcattgcttc 540
ctgagctgca gcagatgcct ttacaaccaa gct
<210> 381
<211> 531
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (5)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (8)
<223> n equals a,t,g, or c
<400> 381
gcagnacnaa ccctcactaa agggaacaaa agctggagct ccaccgcggt gcggccgctc 60
tagaactagt ggatcccccg ggctgcagga attcggcacg aggcggcgtt ggcggcttgt 120
gcagcaatgg ccaagatcaa ggctcgagat cttcgcggga agaagaagga ggagctgctg 180
aaacagctgg acgacctgaa ggtggagctg tcccagctgc gcgtcgccaa agtgacaggc 240
ggtgcggcct ccaagctctc taagatccga gtcgtccgga aatccattgc ccgtgttctc 300
acagttatta accagactca gaaagaaaac ctcaggaaat tctacaaggg caagaagtac 360
aagcccctgg acctgcggcc taagaagaca cgtgccatgc gccgccggct caacaagcac 420
gaggagaacc tgaagaccaa gaagcagcag cggaaggagc ggctgtaccc gctgcggaag 480
tacgcggtca aggcctgagg ggcgcattgt caataaagca cagtggctga g
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<211> 300
<212> DNA
<213> Homo sapiens
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<222> (172)
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<222> (175)
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<221> misc feature
<222> (184)
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<221> misc feature
<222> (190)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (203)
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<221> misc feature
<222> (271)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (292)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (293)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (300)
<223> n equals a,t,g, or c
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ngggngtacc acaaatataa ggcaaagagg aactgctggn cangagtacg gggtgtggnc 60
atgaatcctg tggagcatcc ttttggaggt ggcaaccacc agcacatcgg caagcctcc 120
accatccgca gagatgcccc tgctggccgc aaagtgggtc tcattgctgc nngcnggant 180
ggangteten ggggaaccaa gantgtgcag gagaaagaga actagtgctg agggcetcaa 240
taaagtttgt gtttatgcca aaaaaaaaaa naaaaaaaaa aaaaaaaaag annaaagagn 300
<210> 383
<211> 475
<212> DNA
<213> Homo sapiens
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<222> (36)
<223> n equals a,t,g, or c
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<221> misc feature
<222> (146)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (363)
<223> n equals a,t,g, or c
<220>
<221> misc feature
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<223> n equals a,t,q, or c
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<222> (401)
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<221> misc feature
<222> (404)
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<221> misc feature
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<221> misc feature
<222> (450)
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gtggcttccg cgaggtttcg gcagtggcat ccggggccgg ggtcgcggcc gtggacgggg 120
ccggggccga ggccgcggac tcgcgnaggc aaggccgagg ataaggagtg gatgcccgtc 180
accaagttgg gccgcttggt caaggacatg aagatcaagt ccctggagga gatctatctc 240
ttctccctgc ccattaagga atcagagatc attgattctt cctgggggct ctctcaagga 300
tgagttttga agatatgcca tgcagaagca gaccctgccg gccacgcacc agttcaagca 360
ttnttgnaac gggattaaat gccactcgtt tggtttaatg nccnagagtg gcacncatcc 420
tgggcaaaac tggcaaattt caagtccttn naagtatggg gaaaatggaa cccaa
<210> 384
<211> 127
<212> DNA
<213> Homo sapiens
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<221> misc feature
<222> (5)
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<220>
<221> misc feature
<222> (8)
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<223> n equals a,t,g, or c
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<223> n equals a,t,g, or c
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<222> (103)
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<220>
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<222> (124)
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caatntgnag accagattee taaggetgea naggggacag tgggatetat tttaggaceg 60
angagattaa ncagagacac aggcaattgt atgtcagcag ctngatttaa cccacctaaa 120
                                                                   127
aggngcg
<210> 385
<211> 317
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (30)
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<221> misc feature
<222> (151)
<223> n equals a,t,g, or c
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<221> misc feature
<222> (187)
<223> n equals a,t,g, or c
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<222> (203)
<223> n equals a,t,g, or c
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<221> misc feature
<222> (231)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (264)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (308)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (311)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (316)
<223> n equals a,t,g, or c
<400> 385
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gagaccagtg agaaacgccc cttcatgtgt gcttacccag gctgcaataa gagatatttt 120
aagctgtccc acttacagat gcacagcagg naagcacact ggtgagaaac cataccagtg 180
tgacttnaag gactgtgaac gangttttct cgttcagacc agctcaaaag ncaccaaagg 240
aggacataca ggtgtgaacc attnccagtg taaaattgtt cagcgaaatt ctcccggtcc 300
gaccaacnga ngaccna
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<211> 433
<212> DNA
<213> Homo sapiens
<220>
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<221> misc feature
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<222> (311)

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<221> misc feature
<222> (359)
<223> n equals a,t,g, or c
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<221> misc feature
<222> (385)
<223> n equals a,t,g, or c
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<221> misc feature
<222> (405)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (407)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (427)
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tecegggteg acceaegegt cegeogagag cettageega eggaaactgg acaetggaac 120
eggeagegee atgagactee teeceegett getgetgett etettacteg tgtteeetge 180
cactgtcttg ttccgaggcg gccccagagg cttgttagca gtggcacaag atcttacaga 240
ggatgaagaa acagtagaag attccataat tgaggatgaa gatgatgaag ccgangtaga 300
agaagatgaa nccacagatt ttgtagaaga taaagaggaa gaagatgtgt ctggtgaanc 360
tgaaacttta ccgagtgcag atacnactat actgttttta aaggngnaga ttttccgcca 420
ataacantgt gaa
                                                                   433
<210> 387
<211> 407
<212> DNA
<213> Homo sapiens
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<221> misc feature
<222> (315)
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<220>
<221> misc feature
<222> (356)
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 <221> misc feature
 <222> (359)
 <223> n equals a,t,g, or c
 <220>
 <221> misc feature
 <222> (373)
 <223> n equals a,t,g, or c
 <220>
 <221> misc feature
 <222> (376)
 <223> n equals a,t,g, or c
 <220>
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 ggtgacgggt ctgtacgacg tgcaggcttt caagtttggg gacttcgtgc tgaagagcgg 120
 gctttcctcc cccatctaca tcgatctgcg gggcatcgtg tctcgaccgc gtcttctgag 180
 tcaggttgca gatattttat tccaaactgc ccaaaatgca ggcatcagtt ttgacaccgt 240
 gtgtggagtg ccttatacag ctttgccatt ggctacagtt atctgttcaa ccaatcaaat 300
 tccaatgctt attanaagga aagaaacaaa ggattatgga actaagcgtc ttgtanaang 360
 aatattaatc canganaaac tgtttaatca ttgaaatgtt gtcccan
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 <211> 244
 <212> DNA
 <213> Homo sapiens
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 tcaggcggcg catttttatt gctgtgttgc gctgtaattc ttctatttct gatgctgaat 120
 caatgatgtc tgccatcttt cattaatccc tgaactgttg gttaatacgc ttgagggtga 180
 atgcgaataa taaaaaagga gcctgtagct ccctnatgat nttgcttttc atgttcatcg 240
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338

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ttcc

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ctgncgcccg ncgtgatgcc agggaagaca gggcgacctg gaagtccaac tacttnctta 120
agatcatnca acgtattggg atgattatcc taaaatgggt tcnattggtg ggtagcgagt 180
acganatggt ggggcntcct anagntagta tggcgagcta gagtcccggc taatgttcc 239
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egegetgene geacactgag geegeeeggg acaaageeeg gnnteggnge gaeetttggt 120
cccggnctca gtgagcgagc gagcgcgcag agagggagtg gccaacttna tcactagggg 180
ttccttgtag tnaatgatta acccgccatg ctacttngnc nacgtagcca tgggntacca 240
agetegaget etetagaete gaegegegta atacgaetea etatagggeg aatttgaget 300
ccaccgcggt tgcggccgct ctactagagt cgacctcatg gnttnncccc gaaacccgcn 360
aacacccgct gacncgccct ta
                                                                   382
<210> 391
<211> 375
<212> DNA
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cgggtgcagn tgccagggtg gcctgagcga tctacggatg ggcngtatgg agtggangag 120
acgagatgcg ggtgttanag cagggnctga ccggagtgnc acacatgagt gtcaggtgca 180
ggtagtccga gtcggcgaca tgagcctnga gtagagtcat cantcgatga gatctggagg 240
caactggcga gcaagaccgt ntggtgcant gtcantcang ctgttgcagg tgagagcant 300
gcactcgtcg agtggcgaga cagatcaatc tctgttagcg ggtggaggtt ncactcgcgc 360
tgtggnggtn cactg
                                                                   375
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<211> 121
<212> DNA
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<222> (120)
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gantcatcng agngtgtgga tttgagccgc cgcatttttt aaccctaaat ctcganatgc 60
atcgtgnttc ctgtccattg gactgtaagg tttatgtagg catcttggga acnatggnan 120
                                                                    121
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<211> 83
<212> DNA
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 <222> (73)
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 <400> 393
 aaaanncccn ggngggggcc ccc
 <210> 394
 <211> 218
 <212> DNA
 <213> Homo sapiens
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 <222> (64)
 <223> n equals a,t,g, or c
 <400> 394
gtoggogoag aangogooco goaccoocgo caqqoqoatg totgoaccto ogottgocaa 60
 aggneetegg teagegactg gatgetegee ateaaggtee agtggaagtt etteaagagg 120
 aaaggcgccc ccgcccagg cttccgcgcc cagcgctcgc cacgctcagt gcccgtttta 180
 ccaataaact gagcgacccc aaaaaaaaa aaaaaaag
                                                          218
 <210> 395
 <211> 83
 <212> DNA
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 <400> 395
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aaaaaaaaa aaaaaaaaa aan
                                                           83
<210> 396
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cgcccccaaa acanataacc aattgtattt atngaaaaat aaatagatac aannnactaa 120
acatagcaat tcagatctnt
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<211> 157
<212> DNA
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<221> misc feature

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aattoggoan agotoaagoa gacggggoto aagggggtta catttaataa aaggatgaag 60
атдупавава вазававава вазававава вазававава вазававава 120
nnncengggg gggnccccc ccccctttn ccccctt
<210> 399
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<223> n equals a,t,g, or c
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<222> (341)
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gcaagcgcca tatgagcctg gcgncgccaa tagcgaatcc tgttgtgggc tttttggcct 120
attoccgccc ctcagtcttg ccgggatggc accgcccgca taggacttcc agggttgggc 180
tgagtgggag ttcgactgct gggnctngta attctcgctt tgggggctgc tccttccagg 240
ctggggacac actggggccc gttgttcggt ctcccgtcct ccgacatctt gtctggaact 300
tncgnctngc agtttccata ggagttggag nctgtgcggc ntaattttgg tggaaaaa 358
<210> 400
<211> 399
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aaaacccaan tcagagtatc canaaatcca agccaggtca aaaccaaaac gaaantntca 120
agcaatccaa atcaagtcaa aaacaaaaac caaagtgccg gtacaggcnt nccgtgggtg 180
atcaggccac cettecacte aaatggagtg ggnaantnee aaagactagt nttaccaant 240
ttcanatntc cggantccaa gngcctgtnc cttcccagng ttnagccgct gnattgatcc 300
tctgtggggg cctgcnaaac gccantctgg cgaggtgttc cactggggna attgcctacc 360
cggnagtgct ctcaggttct gngtccctca agctggcca
                                                                   399
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<211> 189
<212> DNA
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cccccntt
                                                       189
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<211> 174
<212> DNA
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cctctgacac tcnagcctgg gtgacagagc gagactccgt ctnaggnaag gaaaaaaaaa 120
aaaaaaaaan cncggggggg gccccngtnc ccaattggcc ctatagnggg tcgt
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<212> DNA
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ctgggaccac aagggaggag actgcaccc actgcctctg ggccctggct gtgggcagag 120
gccaccgtgt gtgtcccgag taaccgtgcc gttgtcgtgt gatgccataa gcgtctgtgc 180
anaaagaaaa anaaaaaaan aaa
<210> 404
<211> 478
<212> DNA
<213> Homo sapiens
<220>
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<223> n equals a,t,g, or c
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<222> (259)
<223> n equals a,t,g, or c
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<222> (427)
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tegacceaeg egteeggggg etgeageatg ttgetgagga gtgaggaata gttgageece 60
aagtcctgaa gaggcgggcc agccaggctg acatctgtgt ttcaagtggg gctcgccatg 120
ccgggggttc ataggtcact ggctctccaa gtgccagang tgggcaggtg gtggcactga 180
geocecccaa cactgtgeec tggtggagaa ageactgaec tgteatgeec eceteaaace 240
tectettetg acgtgeetht tgeaccete ceattaggae aateagteee eteceatetg 300
ggagtcccct tttctttct accctagcca ttcctggtac ccagccatct gcccaagggt 360
gcccctcct ctcccatccc cctgccctcg tgggcagccc ggctggtttt gtaaatgtgg 420
gttgtgnaca gtgatttttt cttgtattta aaaaaggcca gcattgtggt tcattaaa
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<211> 223
<212> DNA
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 <223> n equals a,t,g, or c
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 <222> (223)
 <223> n equals a,t,g, or c
 <400> 405
 agacagcagg acggtggcca tggaagtcgg aatccgctaa ggagtgtgta acaactcacc 60
 tgccgaatca actagccctg aaaatggatg gcgctggagc gtcgggccca tacccgtccg 120
 tegeeggeag tegagagtgg acggganegg egggggenge gegegegege gnegtgatgg 180
 tgtgcgtcgg agggcggcgg cggcggcggg ggtgtgnggt cen
 <210> 406
 <211> 104
 <212> DNA
 <213> Homo sapiens
<220>
 <221> misc feature
. <222> (8)
 <223> n equals a,t,g, or c
 <220>
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 <222> (37)
 <223> n equals a,t,g, or c
 <220>
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 <222> (81)
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 <222> (93)
 <223> n equals a,t,g, or c
 <220>
 <221> misc feature
 <222> (103)
 <223> n equals a,t,g, or c
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<400> 406
 cccacgente egecgacage ageageetea ccatgangtt getgatggte eteatgetgg 60
 eggeeetete ecageactge nacgeagget etngetgeee etna
 <210> 407
 <211> 66
 <212> DNA
 <213> Homo sapiens
 <220>
 <221> misc feature
 <222> (17)
 <223> n equals a,t,g, or c
 <220>
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 <222> (21)
 <223> n equals a,t,g, or c
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 <222> (57)
 <223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (66)
 <223> n equals a,t,g, or c
<400> 407
gccctatagt gagtctngta ncaattcact ggccgtcgtt ttacaacgtc gtgacgngga 60
aaactn
                                                                   66
<210> 408
<211> 278
<212> DNA
<213> Homo sapiens
<220>
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<222> (6)
<223> n equals a,t,g, or c
<220>
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<222> (19)
<223> n equals a,t,g, or c
<220>
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<220>

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<222> (252)
<223> n equals a,t,g, or c
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<222> (275)
<223> n equals a,t,g, or c
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gggcanagca agcteetgna ceteaagtga tecacatgee ttggttgace aaattgetgg 60
gattacaggc atgagccaat atgaccagct caaacatctt ctttttaaat gtcagaagca 120
tgtatagtga ttatttctta ttttttcccc cttgatccat ctcaccagat gtttgttgat 180
tttataagaa ttttcaaact accagettet ggetttgttg aacttgggat ttctgttca 240
ctaattttct tnctcctgtc ttgtacttac tttgntgg
<210> 409
<211> 168
<212> DNA
<213> Homo sapiens
<220>
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<223> n equals a,t,g, or c
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<222> (38)
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<220>
<221> misc feature
<222> (127)
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<222> (140)
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<222> (143)
<223> n equals a,t,g, or c
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<222> (145)
<223> n equals a,t,g, or c
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<221> misc feature
<222> (167)
<223> n equals a,t,g, or c
<400> 409
aataaaactc taaaangatc actataaaaa aagcaggnac gcctgcaggt accggtccgg 60
aattcccggg tcgacccacg cgtccgacgg ctgcgagaag acgacagaag ggcacggctg 120
cgagaanacg acagaagggn gcnantgaaa gaaggcggca gaaaggnt
<210> 410
<211> 415
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (307)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (347)
<223> n equals a,t,g, or c
<400> 410
tgaataccta agatttctgt cttggggttt ttggtgcatg cagttgatta cttcttattt 60
ttcttaccaa ttgtgaatgt tggtgtgaaa caattaatga agcttttgaa tcatccctat 120
tctgtgtttt atctagtcac ataaatggat taattactaa tttcagttga gaccttctaa 180
ttggttttta ctgaaacatt gagggaacac aaatttatgg gcttcctgat gatgattctt 240
ctaggcatca tgtcctatag tttgtcatcc ctgatgaatg taaaattaca ctgttcacaa 300
aggtttngtc tcctttccac tgctattaat catggtcact ctccccnaaa tattatattt 360
tttctattaa aagaaaaaaa tggaaaaaaa ttacaaggca atggaaacta ttata
<210> 411
<211> 636
<212> DNA
<213> Homo sapiens
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<222> (383)
<223> n equals a,t,q, or c
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<221> misc feature
<222> (512)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (519)
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<223> n equals a,t,g, or c
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<222> (544)
<223> n equals a,t,g, or c
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<221> misc feature*
<222> (547)
<223> n equals a,t,g, or c
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<222> (599)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (603)
<223> n equals a,t,g, or c
<400> 411
gcagatcaga cgtggcgacc cgctgaattt aagcatatta gtcagcggag gagaagaaac 60
taaccaggat tccctcagta acggcgagtg aacagggaag agcccagcgc cgaatccccg 120
ccccgcggcg gggcgcggga catgtggcgt acggaagacc cgctccccgg cgccgctcgt 180
ggggggccca agtccttctg atcgaggccc agcccgtgga cggtgtgagg ccggtagcgg 240
cccccggcgc gccgggcccg ggtcttcccg gagtcgggtt gcttgggaat gcagcccaaa 300
gegggtggta aactecatet aaggetaaat eeeettgtaa atttaaetgt tagteeaaag 360
aggaacagct ctttggacac tangaaaaaa ccttgtagag agagtaaaaa atttaacacc 420
catagtaggc ctaaaagcag ccaccaatta agaaagcgtt caagctcaac acccactacc 480
taaaaaatcc caaacatata actgaactcc tnacacccna ttggaccaat ctatcaccct 540
atanaanaac taatggtagt ataagtaaca tgaaaacatt ctncttcgca taagcctgng 600
tanattaaaa cacttgaact gaccattaac aggcca
                                                                   636
<210> 412
<211> 182
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (129)
<223> n equals a,t,g, or c
<220>
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<221> misc feature
<222> (166)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (169)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (170)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (172)
<223> n equals a,t,g, or c
<400> 412
ccattgattt ttatcaatag tcgtattcat acggatagtc ctggtattgt tccatcacat 60
tctgaggatg ctcttcgaac tcttcaaatt cttcttccat atatcacctt aaatagtgga 120
ttgcggtant aaagattgtg cetgtetttt aaccacatca ggetengann gntetegtga 180
ac
                                                                   182
<210> 413
<211> 387
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (157)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (253)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (317)
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<221> misc feature
<222> (323)
<223> n equals a,t,g, or c
<220>
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<221> misc feature
 <222> (349)
 <223> n equals a,t,g, or c
 <220>
 <221> misc feature
 <222> (351)
 <223> n equals a,t,g, or c
 <220>
 <221> misc feature
 <222> (364)
 <223> n equals a,t,g, or c
 <400> 413
 tegacceaeg egteegeea egegteegee aagaceaeee teettteatt tgetagaagg 60
 actcactaga ctcaggaaag ctgttaggct cacagttaca gtttattaca gtaaaaggac 120
 agagattaag atcagcaaag ggaggaggtg cacagcnacg ttccacgaca gatgaggcga 180
 eggettecat etgecetete eeagtggage catataggea geacetgatt etcacageaa 240
 catgtgacaa canccaagaa gtactgccaa tactgccaac cagagcagct tcactcggag 300
 atctttgtgt tccaganttt ttngtttgtc ttggagacag ggtctgggnc ngtttgggca 360-
 gacnaagagt acatggtgga gattcac
                                                                    387
 <210> 414
 <211> 276
 <212> DNA
 <213> Homo sapiens
 <220>
 <221> misc feature
 <222> (60)
 <223> n equals a,t,g, or c
 <220>
<221> misc feature
 <222> (186)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (195)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (237)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (260)
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<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (266)
<223> n equals a,t,g, or c
<400> 414
gcaaaggtcc atactggtta cttggtttca ttgccaccac ttagtggatg ttcagtttan 60
aaccattttg tctgctccct ctggaagcct tgcgcatagc ttactttgta attgttggag 120
aataactgct gaatttttag ctgttttgag ttgattcgca ccactgcacc acaactcact 180
atgaanacta tttancttat ttattatctt gtgaaaagta taccatgaaa attttgntca 240
tactgtattt atcaagtatn attaanagca ctagat
<210> 415
<211> 192
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (78)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (88)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (99)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (145)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (150)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (164)
<223> n equals a,t,g, or c
<220>
<221> misc feature
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<221> misc feature

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<222> (168)
<223> n equals a,t,g, or c
<400> 415
aaaagattgg actaagacac tggccatacc actggacagg gttatgttaa cacctgaaat 60
tgctgggtct tgagagancc caacgcantt ctgggagang gaccacattg gggggtaggt 120
ccacgggctt ggtgatagaa ttatntctcn atcgacttct tgantgcnat atgaactgta 180
acatttgctt ag
<210> 416
<211> 439
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (7)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (9)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (64)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (406)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (417)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (421)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (431)
<223> n equals a,t,g, or c
<220>
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<222> (434)
<223> n equals a,t,q, or c
<400> 416
gcgagantnc gacagaaggg tacggctgcg agagacgaca gaagggtacg gctgcgagaa 60
gacnacagaa gggtacggct gcgagaagac gacagaaggg tacggctgcg agaagacgac 120
agaagggtac ggctgcgaga agacgacaga aggtacggct gcgagaagac gacagaagga 180
tacggctgcg agaagacgac agaagggaga atcttagttc aactttaaat ttgcccacag 240
aaccctctaa atccccttgt aaatttaact gttagtccaa agaggaacag ctctttggac 300
actaggaaaa aaccttgtag agagagtaaa aaatttaaca cccatagtag gcctaaaagc 360
agccaccaat taagaaagcg ttcaaagctc aacacccact acccanaaaa taaaaanaaa 420
naaaaacccg nggnccgct
<210> 417
<211> 155
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (9)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (84)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (122)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (123)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (143)
<223> n equals a,t,g, or c
<220>
<221> misc feature
<222> (153)
<223> n equals a,t,g, or c
<400> 417
gacatettnt tggtttttat tttgaaacaa tttttagget tgtteegggg gtetetgtge 60
tgcctgtact gtattgacct gttntatagg tgccttttta ttaaaaagaa aattcaaaaa 120
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annaaaaaaa aaattaataa aanaaaaaaa aanca 155 <210> 418 <211> 291 <212> DNA <213> Homo sapiens <220> <221> misc feature <222> (285) <223> n equals a,t,g, or c <220> <221> misc feature <222> (286) <223> n equals a,t,g, or c <220> <221> misc feature <222> (288) <223> n equals a,t,g, or c <220> <221> misc feature <222> (289) <223> n equals a,t,g, or c<220> <221> misc feature <222> (291) <223> n equals a,t,g, or c <400> 418 gaaaaaagaa atccatatct taaagaaaca gctttcaagt gcctttctgc agtttttcag 60 gagcgcaaga tagatttggå ataggaataa gctctagttc ttaacaaccg acactcctac 120 aagatttaga aaaaagttta caacataatc tagtttacag aaaaatcttg tgctagaata 180 ctttttaaaa ggtatttga ataccattaa aactgctttt tttttccag caagtatcca 240 accaacttgg ttctgcttca ataaatcttt ggaaaaacta atttnnanna n <210> 419 <211> 340 <212> PRT <213> Homo sapiens <220> <221> SITE

<223> Xaa equals any of the naturally occurring L-amino acids

<222> (2)

<220> <221> SITE

| <22 | 2> (3 | 315) | | | | | | | | | | | | | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| <22 | 3> Xa | aa e | qual | s any | y of | the | nati | ıral | ly o | ccuri | ring | L-ar | mino | acio | is |
| <400 | 0> 4: | 19 | | | | | | | | | · | | | | |
| | | | Trp | Phe 5 | Leu | тrр | Tyr | Val | Lys 10 | Lys | Cys | Gly | Gly | Thr 15 | Thr |
| Arg | Ile | Ile | Ser 20 | Thr | Thr | Asn | Gly | Gly 25 | Gln | Glu | Arg | Lys | Phe 30 | Val | Gly |
| Gly | Ser | Gly 35 | Gln | Val | Ser | Glu | Arg 40 | Ile | Met | Asp | Leu | Leu 45 | Gly | Asp | Arg |
| Val | Lys 50 | Leu | Glu | Arg | Pro | Val 55 | Ile | Tyr | Ile | Asp | Gln 60 | Thr | Arg | Glu | Asn |
| Val 65 | Leu | Val | Glu | Thr | Leu 70 | Asn | His | Glu | Met | Tyr 75 | Glu | Ala | Lys | Tyr | Val 80 |
| Ile | Ser | Ala | Ile | Pro 85 | Pro | Thr | Leu | Gly | Met 90 | Lys | Ile | His | Phe | Asn 95 | Pro |
| Pro | Leu | Pro | Met 100 | Met | Arg | Asn | Gln | Met 105 | Ile | Thr | Arg | Val | Pro 110 | Leu | Gly |
| Ser | Val | Ile 115 | Lys | Cys | Ile | Val | Tyr 120 | туг | Lys | Glu | Pro | Phe 125 | Trp | Arg | Lys |
| Lys | Asp 130 | Tyr | Cys | Gly | Thr | Met 135 | Ile | Ile | Asp | Gly | Glu 140 | Glu | Ala | Pro | Val |
| Ala 145 | Tyr | Thr | Leu | Asp | Asp 150 | Thr | Lys | Pro | Glu | Gly 155 | Asn | туr | Ala | Ala | Ile 160 |
| Met | Gly | Phe | Ile | Leu 165 | Ala | His | Lys | Ala | Arg 170 | Lys | Leu | Ala | Arg | Leu 175 | Thr |
| Lys | Glu | | Arg 180 | | Lys | Lys | | Cys 185 | | Leu | Tyr | | Lys 190 | Val | Leu |
| Gly | Ser | Leu 195 | Glu | Ala | Leu | Glu | Pro 200 | Val | His | туг | Glu | Glu 205 | Lys | Asn | Trp |
| Cys | Glu 210 | Glu | Gln | Tyr | Ser | Gly 215 | Gly | Cys | Tyr | Thr | Thr 220 | туr | Phe | Pro | Pro |
| Gly 225 | Ile | Leu | Thr | Gln | Туг 230 | Gly | Arg | Val | Leu | Arg 235 | Gln | Pro | Val | Asp | Arg 240 |

Ile Tyr Phe Ala Gly Thr Glu Thr Ala Thr His Trp Ser Gly Tyr Met

368

Glu Gly Ala Val Glu Ala Gly Glu Arg Ala Arg Glu Ile Leu His 260 265 270

Ala Met Gly Lys Ile Pro Glu Asp Glu Ile Trp Gln Ser Glu Pro Glu 275 280 285

Ser Val Asp Val Pro Ala Gln Pro Ile Thr Thr Thr Phe Leu Glu Arg 290 295 300

His Leu Pro Ser Val Pro Gly Leu Leu Arg Xaa Ile Gly Leu Thr Thr 305 310 315 320

Ile Phe Ser Ala Thr Ala Leu Gly Phe Leu Ala His Lys Arg Gly Leu 325 330 335

Leu Val Arg Val

<210> 420

<211> 111

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (48)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 420

Thr Arg Asp Leu Val Ser Phe Ile Ser Gly Ile Arg Leu Tyr Asn Leu 1 5 10 15

Met Leu Ser Val Leu Arg His Lys Arg Gln Asn Val Ala Tyr Phe Arg \cdot 20 25 30

Ile Cys Phe Phe Ile Glu Val Ser Gly Ile Leu Ser Lys Ile Val Xaa 35 40 45

Ser Arg His Cys Ser Leu Cys Ser Ser Gly Thr Ser Cys Pro Leu Leu 50 55 60

Ser Leu Gln Ala Thr Gly Asn Ala Ser Val Leu Val Ser Trp Arg Lys 65 70 75 80

Ile Thr Trp Gly Glu Gly Thr Ser Cys Gly Lys Ser Lys Cys Arg Tyr
85 90 95

Glu Met Arg Arg Leu Pro Gln Leu Lys Val Asp Lys Ser Ala Leu

369

100 105 110

<210> 421

<211> 61

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (1)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 421

Xaa Ile Trp Cys Ile Ile Cys Lys Glu Ser Lys Met Met Ser Phe Pro
1 5 10 15

Arg Gly Met Asn Leu Arg Asn Ala Phe Asp Gly Asp Val Ser Val Thr 20 25 30

Leu Cys Tyr Ser Gly Ser Ser Asn Asn Ser Lys Ala Asn Tyr Ser Lys 35 40 45

Cys Lys Ile Phe Leu Phe Pro Arg Phe Thr Phe Val Trp 50 55 60

<210> 422

<211> 51

<212> PRT

<213> Homo sapiens

<400> 422

Thr His Ala Tyr Cys Ser Asn Leu Ser Phe Arg Leu Tyr Asp Gln Trp 1 5 10 15

Arg Ala Trp Met Gln Lys Ser His Lys Thr Arg Asn Gln His Arg Thr
20 25 30

Arg Gly Ser Cys Pro Arg Ala Asp Gly Ala Arg Arg Glu Val Leu Pro 35 40 45

Asp Lys Leu

50

<210> 423

<211> 246

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<212> PRT
<213> Homo sapiens
<220>
<221> SITE
<222> (71)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
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<223> Xaa equals any of the naturally occurring L-amino acids
<220>
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<222> (117)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (147)
<223> Xaa equals any of the naturally occurring L-amino acids
<400> 423
Thr Arg Asn Asp Met Lys Ala Asp Cys Ile Leu Tyr Tyr Gly Phe Gly
                  5
Asp Ile Phe Arg Ile Ser Ser Met Val Val Met Glu Asn Val Gly Gln
             20
Gln Lys Leu Tyr Glu Met Val Ser Tyr Cys Gln Asn Ile Ser Lys Cys
Arg Arg Val Leu Met Ala Gln His Phe Asp Glu Val Trp Asn Ser Glu
     50
                         55
Ala Cys Asn Lys Met Cys Xaa Asn Cys Cys Lys Asp Ser Ala Phe Glu
                     70
Arg Lys Asn Ile Thr Glu Tyr Cys Arg Asp Leu Ile Lys Ile Leu Lys
                                     90
Gln Ala Glu Gly Xaa Gly Met Glu Lys Leu Thr Pro Ile Gly Asn Trp
            100
                                105
Ile Asp Ser Trp Xaa Gly Lys Gly Ala Ala Lys Leu Arg Val Ala Gly
                            120
Val Val Ala Pro Thr Leu Pro Arg Glu Asp Leu Glu Lys Ile Ile Ala
                                            140
    130
                        135
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His Phe Xaa Ile Gln Gln Tyr Leu Lys Glu Asp Tyr Ser Phe Thr Ala 160

Tyr Ala Thr Ile Ser Tyr Leu Lys Ile Gly Pro Lys Ala Asn Leu Leu 165

Asn Asn Glu Ala His Ala Ile Thr Met Gln Val Thr Lys Ser Thr Gln 180

Asn Ser Phe Arg Ala Glu Ser Ser Gln Thr Cys His Ser Glu Gln Gly 195

Asp Lys Lys Met Glu Glu Lys Asn Ser Gly Asn Phe Gln Lys Lys Ala 210 215 220

Ala Asn Met Leu Gln Gln Ser Gly Ser Lys Asn Thr Gly Ala Lys Lys 225 230 235 240

Arg Lys Ile Asp Asp Ala 245

<210> 424

<211> 109

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (77)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 424

Asp His Trp Pro Arg Pro Glu Trp Leu Pro Cys Thr Ser Trp Arg Arg 1 5 10 15

Ala Ser Cys Leu Asn His Val Asn Cys His His Leu Ala Thr Pro Ala 20 25 30

Pro Ala Ser Ala Leu Pro Pro Pro Pro Ser Trp Ser Gly Gly Tyr 35 40 45

Arg Ser Leu Gly Pro Thr Leu Ala Pro Leu Ser Pro Ala Ser Val Cys 50 55 60

Leu Thr Val Phe Pro Pro Leu Pro Gln Leu Arg Cys Xaa Pro Gln Ala 65 70 75 80

Trp Cys Cys Leu Gly Gly Leu Gly Glu Gly Val Cys Gly Gly Arg
85 90 95

Arg Val Lys Thr Glu Ala Arg Cys Gln Asn Gly Leu Glu 100 105

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<210> 425
<211> 57
<212> PRT
<213> Homo sapiens
<220>
<221> SITE
<222> (5)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (49)
<223> Xaa equals any of the naturally occurring L-amino acids
<400> 425
Gly Ser Glu Thr Xaa Lys Tyr Leu Val Glu Asp Lys Arg Leu Gly Leu
 1
                  5
                                     10
                                                         15
Tyr Thr Trp Leu Cys Thr Asp Leu Leu Ser His Ile Gly Asn His His
                                 25
Thr Leu Gln Gly Ile Ser Phe Ile Cys Lys Met Gln Arg Leu Val Leu
                             40
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Xaa Asn His Thr Asn Phe Phe Val Leu 50 55

<210> 426
<211> 99
<212> PRT
<213> Homo sapiens

<220>
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<222> (96)
<223> Xaa equals any of the naturally occurring L-amino acids

<400> 426
Phe Gly Thr Ser Gly Asp Gly Gly Gly Ser Lys Met Ala Gln Ala Ile

1 5 10 15

Phe Glu Ala Leu Glu Gly Met Asp Asn Gln Thr Val Leu Ala Val Gln

373

20 25 30

Ser Leu Leu Asp Gly Gln Gly Ala Val Pro Asp Pro Thr Gly Gln Ser 35 40 45

Val Asn Ala Pro Pro Ala Ile Gln Pro Leu Asp Asp Glu Asp Val Phe 50 55 60

Leu Cys Gly Lys Cys Lys Lys Gln Phe Asn Ser Leu Pro Ala Phe Met 65 70 75 80

Thr His Lys Arg Glu Gln Cys Gln Gly Asn Ala Pro Ala Leu Ala Xaa 85 90 95

Val Ser Leu

<210> 427

<211> 55

<212> PRT

<213> Homo sapiens

<400> 427

Asn Ser Asn Ser Ser Ile Phe Ser Leu Val Ser Val Lys Cys Asp Lys

1 10 15

Ser Thr Tyr Phe Lys Leu Phe Ser Ala Leu Gly Tyr Ser Ser Asn Lys 20 25 30

Asn Thr Asn Leu Trp Val Phe Lys Lys Thr Trp Arg Ile Asn Ser Tyr 35 40 45

Phe Lys Arg Ser Lys Lys Lys 50 55

<210> 428

<211> 54

<212> PRT

<213> Homo sapiens

<220>

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<222> (41)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 428

His Thr Leu Ser Asn Leu Glu Phe Ala Gln Lys Val Glu Pro Cys Asn

374

10 15 Asp His Val Arg Ala Lys Leu Ser Trp Ala Lys Lys Arg Asp Glu Asp 20 25 Asp Val Pro Thr Val Pro Ser Thr Xaa Gly Glu Glu Arg Leu Tyr Asn 40 Pro Phe Leu Arg Val Ala 50 <210> 429 <211> 39 <212> PRT <213> Homo sapiens <400> 429 Arg Gln Thr Lys Val Asn Leu Lys Glu Thr Arg Ser Phe Glu Ile Ile 10 Val Trp Gly Phe Tyr Lys Ser Asn Tyr Cys His Leu His Pro Asp Ser 25 Phe Lys Leu Leu Ile His Pro 35 <210> 430 <211> 133 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (81) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (85) <223> Xaa equals any of the naturally occurring L-amino acids <400> 430 Ala Arg Ala Pro Arg Val Pro Pro Ala Pro His Thr Pro Ser Lys Met

Gly Lys Glu Lys Thr His Ile Asn Ile Val Val Ile Gly His Val Asp

25

Ser Gly Lys Ser Thr Thr Thr Gly His Leu Ile Tyr Lys Cys Gly Gly 35 40 45

Ile Asp Lys Arg Thr Ile Glu Lys Phe Glu Lys Glu Ala Ala Glu Met 50 60

Gly Lys Gly Ser Phe Lys Tyr Ala Trp Val Leu Asp Lys Leu Lys Ala 65 70 75 80

Xaa Val Ser Ala Xaa Ile Thr Ile Asp Ile Ser Leu Trp Lys Phe Glu 85 90 95

Thr Thr Lys Tyr Tyr Ile Thr Ile Ile Asp Ala Pro Gly His Arg Asp 100 105 110

Phe Ile Lys Asn Met Ile Thr Gly Thr Ser Gln Ala Asp Cys Ala Val

Leu Ile Val Ala Ala 130

<210> 431

<211> 190

<212> PRT

<213> Homo sapiens

<400> 431

Leu Cys Trp Ala Arg Pro Leu Pro Ser Gly Pro Val Leu Leu Ala Ala 1 5 10 15

Asn Lys Asp Ser Ser Trp Cys Pro Thr Cys Leu Val His Cys Cys Val 20 25 30

Asn Pro Gly Gly Ser Gly His Arg Arg Gln Pro Arg Pro Arg Val Gln
35 40

Glu Lys Cys Ser Leu Glu Ala Arg Thr Thr Ala Ser His Trp Gly Arg
50 55 60

Arg Gly Pro Arg Thr Thr Ser Ala Ser Tyr Leu Pro Ala Ser Ala Arg 65 70 75 80

Gly Pro Arg Asp Ala Val Leu Phe Gln Pro Pro Ala Leu Gly Arg Gly
85 90 95

His Ala Ser Arg Ile Gln Gly Ala Gly Gly Leu Ser Thr Ala Arg Thr 100 105 110

Cys Leu Leu Ala Ala Ala Ala Val Gly Glu His Gly Gly Cys Gln Arg 115 120 125

Leu Leu Trp Lys Val Ala Ala Ser Giu Met Ala Gly Ala Ala Gly Val 130 135 140

Arg Leu His Thr Ala Gln Val Ser Ser Gly Arg Leu Ser Trp Gly Gly 145 150 160

Ser Ser Ser Ala Glu Gly Trp Trp Gly Val Gln Ser Val Ile Leu Gly
165 170 175

Ala Val Cys Pro Thr Pro Ala Trp Gly Pro His Phe Arg Arg
180 185 190

<210> 432

<211> 310

<212> PRT

<213> Homo sapiens

<400> 432

Gly Pro His Gly Asn Gly Glu Val Arg Trp Pro Leu Pro Pro Pro 1 5 10 15

Pro Arg Phe Val Ala Arg Arg Lys Met Ala Asp Leu Glu Glu Gln Leu 20 25 30

Ser Asp Glu Glu Lys Val Arg Ile Ala Ala Lys Phe Ile Ile His Ala 35 40 45

Pro Pro Gly Glu Phe Asn Glu Val Phe Asn Asp Val Arg Leu Leu 50 55 60

Asn Asn Asp Asn Leu Leu Arg Glu Gly Ala Ala His Ala Phe Ala Gln 65 70 75 80

Tyr Asn Leu Asp Gln Phe Thr Pro Val Lys Ile Glu Gly Tyr Glu Asp 85 90 95

Gln Val Leu Ile Thr Glu His Gly Asp Leu Gly Asn Gly Lys Phe Leu 100 105 110

Asp Pro Lys Asn Arg Ile Cys Phe Lys Phe Asp His Leu Arg Lys Glu 115 120 125

Ala Thr Asp Pro Arg Pro Cys Glu Val Glu Asn Ala Val Glu Ser Trp 130 135 140

Arg Thr Ser Val Glu Thr Ala Leu Arg Ala Tyr Val Lys Glu His Tyr

145 150 155 160 Pro Asn Gly Val Cys Thr Val Tyr Gly Lys Lys Ile Asp Gly Gln Gln 170 Thr Ile Ile Ala Cys Ile Glu Ser His Gln Phe Gln Ala Lys Asn Phe 185 Trp Asn Gly Arg Trp Arg Ser Glu Trp Lys Phe Thr Ile Thr Pro Ser 200 Thr Thr Gln Val Val Gly Ile Leu Lys Ile Gln Val His Tyr Tyr Glu 215 Asp Gly Asn Val Gln Leu Val Ser His Lys Asp Ile Gln Asp Ser Leu Thr Val Ser Asn Glu Val Gln Thr Ala Lys Glu Phe Ile Lys Ile Val 245 Glu Ala Ala Glu Asn Glu Tyr Gln Thr Ala Ile Ser Glu Asn Tyr Gln 260 Thr Met Ser Asp Thr Thr Phe Lys Ala Leu Arg Arg Gln Leu Pro Val 280 Thr Arg Thr Lys Ile Asp Trp Asn Lys Ile Leu Ser Tyr Lys Ile Gly 295 Lys Glu Met Gln Asn Ala 305 310 <210> 433 <211> 289 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (287) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (288) <223> Xaa equals any of the naturally occurring L-amino acids <400> 433

Gln Ser Cys Thr Ser Gly Ser Ser Lys Pro Asn Ser Pro Ser Ile Ser

| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Pro | Ser | Ile | Leu 20 | Ser | Asn | Thr | Glu | His 25 | Lys | Arg | Gly | Pro | Glu 30 | Val | Thr |
| Ser | Gln | Gly 35 | Val | Gln | Thr | Ser | Ser 40 | Pro | Ala | Cys | Lys | Gln 45 | Glu | Lys | Asp |
| Asp | Lys 50 | Glu | Glu | Lys | Lys | Asp 55 | Ala | Ala | Glu | Gln | Val 60 | Arg | Lys | Ser | Thr |
| Leu 65 | Asn | Pro | Asn | Ala | Lys 70 | Glu | Phe | Asn | Pro | Arg 75 | Ser | Phe | Ser | Gln | Pro 80 |
| Lys | Pro | Ser | Thr | Thr 85 | Pro | Thr | Ser | Pro | Arg 90 | Pro | Gln | Ala | Gln | Pro 95 | Ser |
| Pro | Ser | Met | Val 100 | Gly | His | Glņ | Gln | Pro 105 | Thr | Pro | Val | Tyr | Thr 110 | Gln | Pro |
| Val | Суѕ | Phe 115 | Ala | Pro | Asn | Met | Met 120 | Tyr | Pro | Val | Pro | Val 125 | Ser | Pro | Gly |
| Val | Gln 130 | Pro | Leu | Tyr | Pro | Ile 135 | Pro | Met | Thr | Pro | Met 140 | Pro | Val | Asn | Gln |
| Ala 145 | Lys | Thr | Tyr | Arg | Ala 150 | Gly | Lys | Val | Pro | Asn 155 | Met | Pro | Gln | Gln | Arg 160 |
| Gln | Asp | .Gln | His | His 165 | Gln | Ser | Ala | Met | Met 170 | His | Pro | Ala | Ser | Ala 175 | Ala |
| Gly | Pro | Pro | 11e 180 | Ala | Ala | Thr | Pro | Pro 185 | Ala | Tyr | Ser | Thr | Gln 190 | Tyr | Val |
| Ala | Tyr | Ser 195 | Pro | Gln | Gln | Phe | Pro 200 | Asn | Gln | Pro | Leu | Val 205 | Gln | His | Val |
| | His 210 | Tyr | Gln | Ser | Gln | His 215 | Pro | His | Val | туг | Ser 220 | Pro | Val | Ile | Gln |
| Gly 225 | Asn | Ala | Arg | Met | Met 230 | Ala | Pro | Pro | Thr | His 235 | Ala | Gln | Pro | Gly | Leu 240 |
| Val | Ser | Ser | Ser | Ala 245 | Thr | Gln | Tyr | Gly | Ala 250 | His | Glu | Gln | Thr | His 255 | Ala |
| Met | Tyr | Ala | Cys 260 | Pro | Lys | Leu | Pro | туг 265 | Asn | Lys | Glu | Thr | Ser 270 | Pro | Ser |
| Phe | Tvr | Phe | Ala | Ile | Ser | Thr | Glv | Ser | Len | Ala | Gln | Gln | Tvr | Xaa | Xaa |

379

275 280 285

Pro

<210> 434

<211> 147

<212> PRT

<213> Homo sapiens

<400> 434

Lys Val Thr Pro Asp Leu Lys Pro Thr Glu Ala Ser Ser Ser Ala Phe
1 5 10 15

Arg Leu Met Pro Ala Leu Gly Val Ser Val Ala Asp Gln Lys Gly Lys
20 25 30

Ser Thr Val Ala Ser Ser Glu Ala Lys Pro Ala Ala Thr Ile Arg Ile 35 40 45

Val Gln Gly Leu Gly Val Met Pro Pro Lys Ala Gly Gln Thr Ile Thr 50 60

Val Ala Thr His Ala Lys Gln Gly Ala Ser Val Ala Ser Gly Ser Gly 65 70 75 80

Thr Val His Thr Ser Ala Val Ser Leu Pro Ser Met Asn Ala Ala Val 85 90 95

Ser Lys Thr Val Ala Val Ala Ser Gly Ala Ala Arg Pro Pro Ser Ala 100 105 110

Ser Ala Gln Glu Pro Pro Pro Cys Gly Arg Ser Leu Ser Ala Pro Arg 115 120 125

Leu Cys Pro Arg Pro Arg Leu Gly Ser Cys Leu His Gly Ser Gln Phe 130 135 140

Pro Ser Leu 145

<210> 435

<211> 151

<212> PRT

<213> Homo sapiens

<220>

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<223> Xaa equals any of the naturally occurring L-amino acids
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<400> 435
Gly Ser Gly Thr Lys Asp Pro Ser Xaa Cys Asn Thr Gln Thr Xaa Ala
                                   10
His Thr His Thr Gly Gly Glu Ile Ser Leu Phe Ser Met Ser Phe Phe
             20
Ser Trp Ala Glu Thr Gly Tyr Cys Pro Gly Gln Leu Pro Glu Lys His
Arg Arg Glu Leu Arg Ser Ala Arg Pro Ser Ser Leu Ala Pro Gly Phe
     50
                         55
                                             60
Gly Gly Pro Arg Thr Ala Asp Arg Gly Trp Ser Trp Arg Leu Xaa Ser
Arg Ala Tyr Thr Trp Arg Asn Ala Pro Pro Ser Ser Pro Ser Leu Gln
                                     90
Thr Trp Gly Trp Leu Gly Pro Glu Gly Cys Asp Glu Glu Lys Arg Ala
            100
                                105
Ser Val Gly Met Arg Gln Glu Gly Ile Asp Phe Asp Cys Asp Leu Trp
                            120
Gly Phe Leu Pro Ala Leu Asp Asn Pro Ala Lys Asp Cys Phe Phe Leu
                  . 135
Ser Leu Ala Arg Arg Gly Pro
145
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<210> 436

<211> 180

<212> PRT

<213> Homo sapiens

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| <22 | 1> s | ITE | | | | | | | | | | | | | |
| <22 | 2> (| 42) | | | | | | | | | | | | | |
| <22 | 3> X | aa e | qual: | s an | y of | the | nati | ural | ly o | ccur | ring | L-a | mino | acio | ds |
| | | | | | | | | | • | | _ | | | | |
| <22 | 0> | | | | | | | | | | | | | | |
| <22 | 1> S | ITE | | | | | | | | | | | | | |
| <22 | 2> (| 123) | | | | | | | | | | | | | |
| <22 | 3> X | aa e | qual | s any | y of | the | nati | ural | ly o | ccur | ring | L-ai | nino | acio | is |
| | | | | | | | | | | | | | | | |
| <40 | 0> 4 | 36 | | | | • | | | | | | | | | |
| Ala | Pro | Ala | Ser | Pro | Val | Met | Pro | Pro | Gln | Thr | Gln | Ser | Pro | Gly | Gln |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| | | | | | | | | | | | | | | | |
| Pro | Ala | Gln | Pro | Ala | Pro | Met | Val | Pro | Leu | His | Gln | Lys | Gln | Ser | Arg |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| | | | | | | | | | | | | | | | |
| Ile | Thr | Pro | Ile | Gln | Lys | Pro | Arg | Gly | Xaa | Asp | Pro | Val | Glu | Ile | Leu |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| | | | | | | | | | | | | | | | |
| Gln | | Arg | Glu | Tyr | Arg | | Gln | Ala | Arg | Ile | | His | Arg | Ile | Gln |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| _, | _ | | | _ | | | | _ | _ | | | | | | |
| | Leu | Glu | Asn | Leu | | Gly | Ser | Leu | Ala | _ | Asp | Leu | Arg | Thr | _ |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| | m | 71 - | ~ 3 | | _ | | _ | _ | _ | _ | _ | | | _ | |
| Ala | Thr | 116 | GIU | | Lys | Ala | Leu | Arg | | Leu | Asn | Phe | GIn | - | GIn |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| T 011 | A === | C1- | c1 | Wa l | 110.3 | v. l | C | W-4 | 3 | | 3 | mb | | T | |
| Leu | ALY | GIII | 100 | Val | vai | vai | Cys | 105 | AIG | Arg | ASP | THE | | Leu | GIU |
| | | | 100 | | | | | 103 | | | | | 110 | | |
| Thr | Δla | Len | Acn | Δla | Tue | Δla | Tyr | Lve | 100 | V 2 2 | Sar | 712 | Sor | Dro | Cvc |
| | mia | 115 | non | nia | Lys | ALG | 120 | bys | ALG | naa | 261 | 125 | 361 | FLO | cys |
| | | | | | | | 120 | | | | | 123 | | | |
| Ala | Ara | Pro | Ala | Ser | Leu | Ara | Ser | Tro | Ara | Ser | Ser | Ara | Ara | Ser | Ser |
| | 130 | | | | 200 | 135 | | | 9 | DCI | 140 | y | y | JCI | DCI |
| | | | | | | | | | | | 110 | | | | |
| Ara | Ser | Ala | Ser | Ala | Glv | Ara | Ser | Thr | Ara | Asn | Thr | Ser | Ile | Ala | Phe |
| 145 | | | | | 150 | | | | 3 | 155 | | | | | 160 |
| | | | | | | | | | | | | | | | |
| Ser | Ser | Met | Pro | Arq | Ile | Ser | Arg | Asn | Ile | Thr | Asp | Pro | Ser | Gln | Ala |
| | | | | 165 | | | • | | 170 | | 4 | | | 175 | |
| | | | | | | | | | | | | | | _ | |

Lys Ser Arg Ser

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<211> 415
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Arg Lys Tyr Leu Val Pro Leu Xaa Lys Lys Leu Tyr Leu Lys Trp Ala
                                     10
Leu Glu Glu Tyr Leu Asp Glu Phe Asp Pro Cys His Cys Arg Pro Cys
                                 25
Gln Asn Gly Gly Leu Ala Thr Val Glu Gly Thr His Cys Leu Cys His
         35
Cys Lys Pro Tyr Thr Phe Gly Ala Ala Cys Glu Gln Gly Val Leu Val
                         55
Gly Asn Gln Ala Gly Gly Val Asp Gly Gly Trp Ser Cys Trp Ser Ser
                     70
                                         75
Trp Ser Pro Cys Val Gln Gly Lys Lys Thr Arg Ser Arg Xaa Cys Xaa
Asn Pro Pro Pro Ser Gly Gly Gly Arg Ser Cys Val Gly Glu Thr Thr
                                105
Glu Ser Thr Gln Cys Glu Asp Glu Glu Leu Glu His Leu Arg Leu Leu
                            120
Glu Pro His Cys Phe Pro Leu Ser Leu Val Pro Thr Glu Phe Cys Pro
                        135
```

| 145 | rio | FIU | Ala | Leu | 150 | чэр | GIY | rne | vai | 155 | vah | GIU | GIY | 1111 | 160 |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Phe | Pro | Val | Gly | Lys 165 | Asn | Val | Val | Tyr | Xaa 170 | Cys | Asn | Glu | Gly | Туг 175 | Ser |
| Leu | Ile | Gly | Asn 180 | Pro | Val | Ala | Arg | Cys 185 | Gly | Glu | Asp | Leu | Arg 190 | Trp | Leu |
| Val | Gly | Glu 195 | Met | His | Cys | Gln | Lys 200 | Ile | Ala | Cys | Val | Leu 205 | Pro | Val | Leu |
| Met | Asp 210 | Gly | Ile | Gln | Ser | His 215 | Pro | Gln | Lys | Pro | Phe 220 | Tyr | Thr | Val | Gly |
| Glu 225 | Lys | Val | Thr | Val | Ser 230 | Cys | Ser | Gly | Gly | Met 235 | Ser | Leu | Glu | Gly | Pro 240 |
| Ser | Ala | Phe | Leu | Cys 245 | Gly | Ser | Ser | Leu | Lys 250 | Trp | Ser | Pro | Glu | Met 255 | Lys |
| Asn | Ala | Arg | Cys 260 | Val | Gln | Lys | Glu | Asn 265 | Pro | Leu | Thr | Gln | Ala 270 | Val | Pro |
| Lys | Суз | Gln 275 | Arg | Trp | Glu | Lys | Leu 280 | Gln | Asn | Ser | Arg | Cys 285 | Val | Cys | Lys |
| | Pro 290 | _ | | - | _ | 295 | | | _ | | 300 | | | | |
| Arg 305 | Ser | Lys | Arg | Ile | Leu 310 | Pro | Leu | Thr | Val | Cys 315 | Lys | Met | His | Val | Leu 320 |
| His | Cys | Gln | Gly | Arg 325 | Asn | Tyr | Thr | Leu | Thr 330 | Gly | Arg | Asp | Ser | Cys 335 | Thr |
| | Pro | | 340 | | | | | 345 | _ | | | | 350 | _ | _ |
| Lys | Cys | Asp 355 | Ala | Glu | Ser | Ser | Lys 360 | Cys | Val | Cys | Arg | Glu 365 | Ala | Ser | Glu |
| Cys | Glu 370 | Glu | Glu | Gly | Phe | Ser 375 | Ile | Cys | Val | Glu | Val 380 | Asn | Gly | Lys | Glu |
| G1n 385 | Thr | Met | Ser | Glu | 390 | Glu | Ala | Gly | Ala | Leu 395 | Arg | Cys | Arg | Gly | Gln 400 |
| Ser | Ile | Ser | Val | Thr 405 | Ser | Ile | Arg | Pro | Cys 410 | Ala | Ala | Glu | Thr | Gln 415 | |

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<210> 438
<211> 285
<212> PRT
<213> Homo sapiens
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<223> Xaa equals any of the naturally occurring L-amino acids
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<400> 438
Leu Ile Arg Leu Thr Ile Gly Lys Ala Gly Ser Leu Gln Tyr Arg Xaa
                                     10
Xaa Xaa Phe Pro Gly Met Glu Ala Phe Leu Gly Ser Arg Ser Gly Leu
Trp Ala Gly Gly Pro Ala Pro Gly Gln Phe Tyr Arg Ile Pro Ser Thr
Pro Asp Ser Phe Met Asp Pro Ala Ser Ala Leu Tyr Arg Gly Pro Ile
    50
Thr Arg Thr Gln Asn Pro Met Val Thr Gly Thr Ser Val Leu Gly Val
Lys Phe Glu Gly Gly Val Val Ile Ala Ala Asp Met Leu Gly Ser Tyr
                 85
                                     90
Gly Ser Leu Ala Arg Phe Arg Asn Ile Ser Arg Ile Met Arg Val Asn
            100
Asn Ser Thr Met Leu Gly Ala Ser Gly Asp Tyr Ala Asp Phe Gln Tyr
```

·Leu Lys Gln Val Leu Gly Gln Met Val Ile Asp Glu Glu Leu Leu Gly

140

| 145 | GIY | HIS | ser | Tyr | 150 | Pro | Arg | Ala | He | H15 | Ser | Trp | Leu | Thr | 160 |
|------------|----------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Ala | Met | туг | Ser | Arg 165 | Arg | Ser | Lys | Met | Asn 170 | Pro | Leu | Trp | Asn | Thr 175 | Me |
| Val | Ile | Gly | Gly 180 | Tyr | Ala | Asp | Gly | Glu 185 | Ser | Phe | Leu | Gly | Tyr 190 | Val | Ası |
| Met | Leu | Gly 195 | Val | Ala | Tyr | Glu | Ala 200 | Pro | Ser | Leu | Ala | Thr 205 | Gly | туr | Gly |
| Ala | Tyr 210 | Leu | Ala | Gln | Pro | Leu 215 | Leu | Arg | Glu | Val | Leu 220 | Glu | Lys | Gln | Pro |
| Val 225 | Leu | Ser | Gln | Thr | Glu 230 | Ala | Arg | Asp | Leu | Val 235 | Glu | Arg | Cys | Met | Arc 246 |
| Val | Leu | Tyr | Tyr | Arg 245 | Asp | Ala | Arg | Ser | Tyr 250 | Asn | Arg | Phe | Gln | Ile 255 | Ala |
| Thr | Val | Thr | Glu 260 | Lys | Gly | Val | Glu | 11e 265 | Glu | Gly | Pro | Leu | Ser 270 | Thr | Glu |
| Thr | Asn | Trp 275 | Asp | Ile | Ala | His | Met 280 | Ile | Ser | Gly | Phe | Glu 285 | | | |
| -216 |)> 4: | | | | | | | | | | | | | | |
| |)> 4. l> 18 | | | | | | | | | | | | | | |
| | 2> PF | | | | | | | | | | | | | | |
| | | | sapie | ens | | | | | | | | | | | |
| |)> 43 | | | • | | | _ | | | | | | | | |
| 1 | | | Ala | 5 | | | | | 10 | | | | | 15 | |
| Asp | Glu | Leu | Val 20 | Ala | Ile | Ile | Ala | Arg 25 | Thr | Asp | Leu | Lys | Lys 30 | Asn | Arq |
| Asp | Tyr | Pro 35 | Leu | Ala | Ser | Lys | Asp 40 | Ala | Lys | Lys | Gln | Leu 45 | Leu | Cys | Gly |
| Ala | Ala 50 | Ile | Gly | Thr | His | Glu 55 | Asp | Asp | Lys | Tyr | Arg 60 | Leu | Asp | Leu | Let |
| Ala 65 | Gln | Ala | Gly | Val | Asp 70 | Val | Val | Val | Leu | Asp 75 | Ser | Ser | Gln | Gly | Asr 80 |

Ser Ile Phe Gln Ile Asn Met Ile Lys Tyr Ile Lys Asp Lys Tyr Pro

85 90 95 Asn Leu Gln Val Ile Gly Gly Asn Val Val Thr Ala Ala Gln Ala Lys 100 105 Asn Leu Ile Asp Ala Gly Val Asp Ala Leu Arg Val Gly Met Gly Ser 120 Gly Ser Ile Cys Ile Thr Gln Glu Val Leu Ala Cys Gly Arg Pro Gln 135 Ala Thr Ala Val Tyr Lys Val Ser Glu Tyr Ala Arg Arg Phe Gly Val Pro Val Ile Ala Asp Gly Gly Ile Gln Asn Val Gly His Ile Ala Lys 170 Ala Leu Ala Leu Gly Ala Pro Gln Ser <210> 440 <211> 211 <212> PRT <213> Homo sapiens <400> 440 Leu Gln Gly Arg Ser Thr Pro Ile Trp Pro Ala Leu Ala Thr Val Thr 5 10 Ser, Arg Thr Pro Ala Leu Gly Pro Gln Ala Gly Ile Asp Thr Asn Glu Ile Ala Pro Leu Glu Pro Asp Ala Pro Pro Asp Ala Cys Glu Ala Ser 40 Phe Asp Ala Val Ser Thr Ile Arg Gly Glu Leu Phe Phe Lys Ala 50 Gly Phe Val Trp Arg Leu Arg Gly Gly Gln Leu Gln Pro Gly Tyr Pro Ala Leu Ala Ser Arg His Trp Gln Gly Leu Pro Ser Pro Val Asp Ala 90 Ala Phe Glu Asp Ala Gln Gly His Ile Trp Phe Phe Gln Gly Ala Gln 100 105

Tyr Trp Val Tyr Asp Gly Glu Lys Pro Val Leu Gly Pro Ala Pro Leu

125

120

Thr Glu Leu Gly Leu Val Arg Phe Pro Val His Ala Ala Leu Val Trp 135 Gly Pro Glu Lys Asn Lys Ile Tyr Phe Phe Arg Gly Arg Asp Tyr Trp 155 Arg Phe His Pro Ser Thr Arg Arg Val Asp Ser Pro Val Pro Arg Arg 165 170 Pro Leu Thr Gly Glu Gly Cys Pro Leu Arg Ser Thr Leu Pro Ser Arg 185 Met Leu Met Ala Met Pro Thr Ser Cys Ala Ala Ala Ser Thr Gly Ser 200 Leu Thr Leu 210 <210> 441 <211> 80 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (40) <223> Xaa equals any of the naturally occurring L-amino acids <400> 441 Gly Gly Ala Gly Lys Leu Leu Ser Phe Thr His Ser Ala Pro Trp Ser 10 Arg Leu Trp Ser Ser Leu Gly Lys Arg Val Thr Gly Glu Ser Gln Gly 20 Leu Glu Lys Leu Pro Gly Thr Kaa Asp Gly Leu Ala Ala Leu Thr Gln 40 . Asp Pro Leu Pro Leu Pro Pro Pro Leu Cys Arg Asn Thr Gly Thr Pro Arg Gly Lys Met Ser Phe Ser Arg Leu Gln Phe Ser Pro Arg Lys Leu 65

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<210> 442
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<212> PRT
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Asn Val His Leu Tyr Ile Met Tyr Tyr Met Glu Ala Lys His Ala Val
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Ser Phe Met Thr Cys Thr Gln Asn Val Ala Pro Asp Met Phe Arg Thr

| | | | 20 | | | | | 23 | | | | | 30 | | |
|------------|------------|------------|------------|------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Ile | Pro | Pro 35 | Glu | Ala | Asn | Ile | Pro 40 | Ile | Pro | Val | Lys | Ser 45 | Asp | Met | Val |
| Met | Met 50 | His | Glu | His | His | Lys 55 | Glu | Thr | Glu | туг | Lys 60 | Asp | Lys | Ile | Pro |
| Leu 65 | Leu | Gln | Gln | Pro | Lys 70 | Arg | Glu | Glu | Glu | Glu 75 | Val | Leu | Asp | Gln | Gly 80 |
| Asp | Phe | Tyr | Ser | Leu 85 | Leu | Ser | Lys | Leu | Leu 90 | Gly | Glu | Arg | Glu | Asp 95 | Val |
| Val | His | Val | His 100 | Lys | Tyr | Asn | Pro | Thr 105 | Glu | Lys | Ala | Glu | Ser 110 | Glu | Ser |
| Asp | Leu | Val 115 | Ala | Glu | Ile | Ala | Asn 120 | Val | Val | Gln | Lys | Lys 125 | . Asp | Leu | Gly |
| Arg | Ser 130 | Asp | Ala | Arg | Glu | Gly 135 | Ala | Glu | His | Glu · | Arg 140 | Gly | Asn | Ala | Ile |
| Leu 145 | Val | Arg | Asp | Arg | 11e 150 | His | Lys | Phe | His | Arg 155 | Leu | Val | Ser | Thr | Leu 160 |
| Arg | Pro | Pro | Glu | Ser 165 | Arg | Val | Phe | Ser | Leu 170 | Gln | Gln | Pro | Pro | Pro 175 | Gly |
| Glu | Gly | Thr | Trp 180 | Glu | Pro | Glu | His | Thr 185 | Gly | Asp | Phe | His | Met 190 | Glu | Glu |
| Ala | Leu | Asp 195 | Trp | Pro _. | Gly | Val | Туг 200 | Leu | Leu | Pro | Gly | Xaa 205 | Val | Ser | Gly |
| Val | Ala 210 | Leu | Xaa | Pro | Lys | Asn 215 | Asn | Leu | Val | Ile | Phe 220 | His | Arg | Gly | Asp |
| His 225 | Val | Trp | Asp | Gly | Asn 230 | Ser | Phe | Asp | Ser | Lys 235 | Phe | Val | Tyr | Gln | Gln 240 |
| Ile | Gly | Leu | Gly | Pro 245 | Ile | Glu | Glu | Asp | Thr 250 | Ile | Leu | Val | Ile | Asp 255 | Pro |
| Asn | Asn | Ala | Ala 260 | Val | Leu | Gln | Ser | Ser 265 | Gly | Lys | Asn | Lèu | Phe 270 | Tyr | Leu |
| Pro | His | Gly 275 | Leu | Ser | Ile | Asp | Lys 280 | Asp | Gly | Asn | Tyr | Trp 285 | Val | Thr | Asp |
| Val | Ala | Leu | His | Gln | Val | Phe | Lys | Leu | Asp | Pro | Asn | Asn | Lys | Glu | Gly |

| | 290 | | | | , | 295 | | | | | 300 | | | | |
|---------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Pro 3 0 5 | Val | Leu | Ile | Leu | Gly 310 | Arg | Ser | Met | Gln | Pro 315 | Gly | Ser | Asp | Gln | Asn 320 |
| His | Phe | Cys | Gln | Pro 325 | Thr | Asp | Val | Ala | Val 330 | Asp | Pro | Gly | Thr | Gly 335 | Ala |
| Ile | Tyr | Val | Ser 340 | Asp | Gly | туг | Cys | Asn 345 | Ser | Arg | Ile | Val | Gln 350 | Phe | Ser |
| Pro | Ser | Gly 355 | Lys | Phe | Ile | Thr | Gln 360 | Trp | Gly | Glu | Glu | Ser 365 | Ser | Gly | Ser |
| Ser | Pro 370 | Leu | Pro | Gly | Gln | Phe 375 | Thr | Val | Pro | His | Ser 380 | Leu | Ala | Leu | Val |
| Pro 385 | Leu | Leu | Gly | Gln | Leu 390 | Cys | Val | Ala | Asp | Arg 395 | Glu | Asn | Gly | Arg | Ile 400 |
| Gln | Cys | Phe | Lys | Thr 405 | Asp | Thr | Lys | Glu | Phe 410 | Val | Arg | Glu | Ile | Lys 415 | His |
| Ser | Ser | Phe | Gly 420 | Arg | Asn | Val | Phe | Ala 425 | Ile | Ser | Tyr | Ile | Pro 430 | Gly | Leu |
| Leu | Phe | Ala 435 | Val | Asn | Gly | Lys | Pro 440 | His | Phe | Gly | Asp | Gln 445 | Glu | Pro | Val |
| Gln | Gly 450 | Phe | Val | Met | Asn | Phe 455 | Ser | Asn | Gly | Glu | 11e 460 | Ile | Asp | Ile | Phe |
| Lys 465 | Pro | Val | Arg | Xaa | Leu 470 | Leu | Asp | Met | Pro | His 475 | Asp | Ile | Val | Ala | Ser 480 |
| Glu | Asp | Gly | Thr | Val 485 | Tyr | Ile | Gly | Arg | Cys 490 | Ser | Tyr | Gln | His | Arg 495 | Val |
| Gly | Ser | Ser | Thr 500 | Leu | Asp | Xaa | Arg | Xaa 505 | | Gly | Thr | Ser | Val 510 | Gln | Phe |
| Lys | Lys | Gly 515 | Leu | Xaa | Ile | Glu | Val 520 | Gln | Gly | Asn | Pro | Lys 525 | Lys | Pro | Glu |
| Gly | 11e 530 | Cys | Cys | Phe | Pro | Xaa 535 | Thr | Thr | Leu | Arg | Val 540 | Ile | Pro | Val | Val |
| Gly 545 | Xaa | Trp | Arg | Gly | His 550 | Gly | Pro | Asn | Leu | Ile 555 | Pro | Val | Gly | Lys | Asn 560 |
| Pro | Arg | Gly | Pro | Leu | Gly | Arg | • | | | | | | | | |

391

565

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<210> 443
<211> 129
<212> PRT
<213> Homo sapiens
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<222> (123)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
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<400> 443
Arg Pro Ser Cys Ser Pro Gly Ser Val Ser Ala Ala Val Asn Met
Glu Pro Pro Asp Ala Pro Ala Gln Ala Arg Gly Ala Pro Arg Leu Leu
            20
                                 25
                                                     30
Leu Leu Ala Val Leu Leu Ala Ala His Pro Asp Ala Gln Ala Glu Val
                             40
Arg Leu Ser Val Pro Pro Leu Val Glu Val Met Arg Gly Lys Ser Val
                         55
Ile Leu Asp Cys Thr Pro Thr Gly Thr His Asp His Tyr Met Leu Glu
65
                    70
Trp Phe Leu Thr Asp Arg Ser Gly Ala Arg Pro Arg Leu Ala Ser Ala
                                     90
Glu Met Gln Gly Ser Glu Leu Gln Val Thr Met His Asp Thr Arg Gly
           100
                                105
Arg Ser Pro Pro Tyr Gln Leu Gly Leu Pro Xaa Gly Ala Trp Xaa Leu
```

120

125

Xaa

<210> 444 <211> 131 <212> PRT <213> Homo sapiens <400> 444 Glu Pro Arg Val Glu Arg Glu Thr Pro Gly Gln Pro Phe Ser Ser Ser 10 Phe Pro Ser Pro Ser Pro Phe Pro Asn Val Ala Ser Met Trp Val Leu 25 Gly Thr Trp Glu Lys Pro Leu Leu Cys His Phe Phe Ser Leu Phe Pro Ser Ser Pro Pro Thr Val Trp Leu Met Met Ser Ser Gly Val Met Val Thr Thr Pro Cys Ser Leu Phe Trp Tyr Phe Pro Cys Gln Phe Pro Leu Ser Ala Arg Leu Cys Pro Lys Ile Pro Ser Ala Ser Ser Leu His Val Ala Glu Gly Pro Gly Leu Pro Gln Val Pro Cys Leu Ser Asn Lys Val 105 Glu Thr Ile Lys Pro Gly Lys Lys Lys Gly Gly Arg Ser Lys Gly Ser Pro Arg 130

<210> 445

<211> 405

<212> PRT

<213> Homo sapiens

<400> 445

Gly Thr Gly Leu Val Pro Ile Arg Gln Ser Thr Lys Phe Asp Ser Ser 1 5 10 15

Leu Asp Arg Lys Asp Lys Phe Ser Phe Asp Leu Gly Lys Gly Glu Val 20 25 30

Ile Lys Ala Trp Asp Ile Ala Ile Ala Thr Met Lys Val Gly Glu Val

| | | 35 | | | | | 40 | | | | | 45 | | | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Cys | His 50 | Ile | Thr | Cys | Lys | Pro 55 | Glu | Tyr | Ala | Tyr | Gly 60 | Ser | Ala | Gly | Ser |
| Pro 65 | Pro | Lys | Ile | Pro | Pro 70 | Asn | Ala | Thr | Leu | Val 75 | Phe | Glu | Val | Glu | Leu 80 |
| Phe | Glu | Phe | Lys | Gly 85 | Glu | Asp | Leu | Thr | Glu 90 | Glu | Glu | Asp | Gly | Gly 95 | Ile |
| Ile | Arg | Arg | Ile 100 | Gln | Thr | Arg | Gly | Glu 105 | Gly | Tyr | Ala | Lys | Pro 110 | Asn | Glu |
| Gly | Ala | Ile 115 | Val | Glu | Val | Ala | Leu 120 | Glu | Gly | Туr | туг | Lys 125 | Asp | Lys | Leu |
| Phe | Asp 130 | Gln | Arg | Glu | Leu | Arg 135 | Phe | Glu | Ile | Gly | Glu 140 | Gly | Glu | Asn | Leu |
| Asp 145 | Leu | Pro | Tyr | Gly | Leu 150 | Glu | Arg | Ala | Ile | Gln 155 | Arg | Met | Glu | Lys | Gly 160 |
| Glu | His | Ser | Ile | Val 165 | Tyr | Leu | Lys | Pro | Ser 170 | Tyr | Ala | Phe | Gly | Ser 175 | Val |
| Gly | Lys | Glu | Lys 180 | Phe | Gln | Ile | Pro | Pro 185 | Asn | Ala | Glu | Leu | Lys 190 | Tyr | Glu |
| Leu | His | Leu 195 | Lys | Ser | Phe | Glu | Lys 200 | Ala | Lys | Glu | Ser | Trp 205 | Glu | Met | Asn |
| Ser | Glu 210 | Glu | Lys | Leu | Glu | Gln 215 | Ser | Thr | Ile | Val | Lys 220 | Glu | Arg | Gly | Thr |
| Val 225 | Tyr | Phe | Lys | Glu | Gly 230 | Lys | Tyr | Lys | Gln | Ala 235 | Leu | Leu | Gln | Tyr | Lys 240 |
| Lys | Ile | Val | Ser | Trp 245 | Leu | Glu | Tyr | Glu | Ser 250 | Ser | Phe | Ser | Asn | Glu 255 | Glu |
| Ala | Gln | Lys | Ala 260 | Gln | Ala | Leu | Arg | Leu 265 | Ala | Ser | His | Leu | Asn 270 | Leu | Ala |
| Met | Cys | His 275 | Leu | Lys | Leu | Gln | Ala 280 | Phe | Ser | Ala | Ala | Ile 285 | Glu | Ser | Cys |
| Asn | Lys 290 | Ala | Leu | Glų | Leu | Asp 295 | Ser | Asn | Asn | Glu | Lys 300 | Gly | Leu | Phe | Arg |
| Arg | Gly | Glu | Ala | His | Leu | Ala | Val | Asn | Asp | Phe | Glu | Leu | Ala | Arg | Ala |

305 310 315 320 Asp Phe Gln Lys Val Leu Gln Leu Tyr Pro Asn Asn Lys Ala Ala Lys Thr Gln Leu Ala Val Cys Gln Gln Arg Ile Arg Arg Gln Leu Ala Arg Glu Lys Lys Leu Tyr Ala Asn Met Phe Glu Arg Leu Ala Glu Glu Glu 360 Asn Lys Ala Lys Ala Glu Ala Ser Ser Gly Asp His Pro Thr Asp Thr Glù Met Lys Glu Glu Gln Lys Ser Asn Thr Ala Gly Ser Gln Ser Gln 395 Val Glu Thr Glu Ala 405 <210> 446 <211> 232 <212> PRT <213> Homo sapiens <400> 446 Pro Leu Val Pro Ser Ser Gln Lys Ala Leu Leu Leu Glu Leu Lys Gly 5 15 Leu Gln Glu Glu Pro Val Glu Gly Phe Arg Val Thr Leu Val Asp Glu Gly Asp Leu Tyr Asn Trp Glu Val Ala Ile Phe Gly Pro Pro Asn Thr Tyr Tyr Glu Gly Gly Tyr Phe Lys Ala Arg Leu Lys Phe Pro Ile Asp 50 Tyr Pro Tyr Ser Pro Pro Ala Phe Arg Phe Leu Thr Lys Met Trp His Pro Asn Ile Tyr Glu Thr Gly Asp Val Cys Ile Ser Ile Leu His Pro 90 Pro Val Asp Asp Pro Gln Ser Gly Glu Leu Pro Ser Glu Arg Trp Asn 100 105 Pro Thr Gln Asn Val Arg Thr Ile Leu Leu Ser Val Ile Ser Leu Leu 120

Asn Glu Pro Asn Thr Phe Ser Pro Ala Asn Val Asp Ala Ser Val Met 130 135 Tyr Arg Lys Trp Lys Glu Ser Lys Gly Lys Asp Arg Glu Tyr Thr Asp 145 150 155 Ile Ile Arg Lys Gln Val Leu Gly Thr Arg Trp Thr Arg Val Asn Gly 165 170 Val Lys Val Pro Thr Thr Leu Ala Glu Tyr Cys Val Lys Thr Lys Ala 185 Pro Ala Pro Asp Glu Gly Ser Asp Leu Phe Tyr Asp Asp Tyr Tyr Glu 195 200 205 Asp Gly Glu Val Glu Glu Glu Ala Asp Ser Cys Phe Gly Asp Asp Glu 215 220 Asp Asp Ser Gly Thr Glu Glu Ser 230 <210> 447 <211> 356 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (12) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (53) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (191) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (263) <223> Xaa equals any of the naturally occurring L-amino acids <400> 447 Cys Ser Pro Pro Pro Pro Pro Ala Ala Ala Xaa Ala Ala Ala Ala

| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
|------------|------------|------------|------------|-----------|------------|------------|------------|------------|-----------|------------|------------|------------|------------|-----------|------------|
| Ala | Met | Ala | Gln 20 | Tyr | Lys | Gly | Ala | Ala 25 | Ser | Glu | Ala | Gly | Arg 30 | Ala | Met |
| His | Leu | Met 35 | Lys | Lys | Arg | Glu | Lys 40 | Gln | Arg | Glu | Gln | Met 45 | Glu | Gln | Met |
| Lys | Gln 50 | Arg | Ile | Xaa | Glu | Glu 55 | Asn | Ile | Met | Lys | Ser 60 | Asn | Ile | Asp | Lys |
| Lys 65 | Phe | Ser | Ala | His | Tyr 70 | Asp | Ala | Val | Glu | Ala 75 | Glu | Leu | Lys | Ser | Ser 80 |
| Thr | Val | Gly | Leu | Val 85 | Thr | Leu | Asn | Asp | Met 90 | Lys | Ala | Lys | Gln | Glu 95 | Ala |
| Leu | Val | Lys | Glu 100 | Arg | Glu | Lys | Gln | Leu 105 | Ala | Lys | Lys | Glu | Gln 110 | | Lys |
| Glu | Leu | Gln 115 | Met | Lys | Leu | Glu | Lys 120 | Leu | Arg | Glu | Lys | G1u 125 | Arg | Lys | Lys |
| Glu | Ala 130 | Lys | Arg | Lys | Ile | Ser 135 | Ser | Leu | Ser | Phe | Thr 140 | Leu | Glu | Glu | Glu |
| Glu 145 | Glu | Gly | Gly | Glu | Glu 150 | Glu | Glu | Glu | Ala | Ala 155 | Met | Tyr | Glu | Glu | Glu 160 |
| | | | | 165 | Ile | | | _ | 170 | | | | _ | 175 | |
| Pro | Asp | Val | Asp 180 | Thr | Ser | Phe | Leu | Pro 185 | Asp | Arg | Asp | Arg | Glu 190 | Xaa | Glu |
| | | 195 | | | Glu | | 200 | | | | | 205 | | - | |
| | 210 | | | | Glu | 215 | | | | | 220 | | - | • | - |
| 225 | | | | | 230 | | | • | | 235 | | | | | Met 240 |
| | | | | 245 | Lys | | | | 250 | | | | | 255 | |
| | | | 260 | | Gly | | | 265 | | | | | 270 | | |
| Leu | He | Ile | Pro | His | His | His | Ser | Phe | Tyr | Asp | Phe | Ile | Val | Thr | Lys |

275 280 285

Ala Arg Gly Lys Ser Gly Pro Leu Phe Asn Phe Asp Val His Asp Asp 290 295 300

Val Arg Leu Leu Ser Asp Ala Thr Val Glu Lys Asp Glu Ser His Ala 305 310 315 320

Gly Lys Val Val Leu Arg Ser Trp Tyr Glu Lys Asn Lys His Ile Phe 325 330 335

Pro Ala Ser Arg Trp Glu Pro Tyr Asp Pro Glu Lys Lys Trp Asp Lys 340 345 350

Tyr Thr Ile Arg 355

<210> 448

<211> 88

<212> PRT

<213> Homo sapiens

<400> 448

Lys Thr His Lys Met Cys Asp Ala Phe Val Gly Thr Trp Lys Leu Val
1 5 10 15

Ser Ser Glu Asn Phe Asp Asp Tyr Met Lys Glu Val Gly Val Gly Phe 20 25 30

Ala Thr Arg Lys Val Ala Gly Met Ala Lys Pro Asn Met Ile Ile Ser 35 40 45

Val Asn Gly Asp Val Ile Thr Ile Lys Ser Glu Ser Thr Phe Lys Asn 50 55 60

Thr Glu Ile Ser Phe Ile Leu Gly Gln Glu Phe Asp Glu Ala Leu Gln 65 70 75 80

Met Thr Gly Lys Ser Arg Ala Pro 85

<210> 449

<211> 171

<212> PRT

<213> Homo sapiens

<220>

| <22 | 1> S | ITE | | | | | | | | | | | | | |
|----------|------|------|-------|----------|--------|------|------|-------|------|------|------|------|------|------|-----|
| <22 | 2> (| 72) | | | | | | | | | | | | | |
| <22 | 3> X | aa e | qual | s an | y of | the | nati | ural | ly o | ccur | ring | L-ai | mino | acio | ds |
| <220 | > | | | | | | | | | | | • | | | |
| <22 | 1> S | ITE | | | | | | | | | | | | | |
| <222 | 2> (| 132) | | | | | | | | | | | | | |
| <223 | 3> x | aa e | qual: | s an | y of | the | nati | ural | ly o | ccur | ring | L-a | mino | aci | is |
| <400 | n 1 | 40 | | | | | | | | | | | | | |
| | | | | * | 14 - L | Db - | 3 | **- 1 | m | | • | | | _ | |
| Leu 1 | 116 | ren | Val | Leu 5 | met | Pue | vai | vai | 10 | met | гуѕ | Arg | Arg | Asp | rys |
| | | | | | | | | | | | | | | | |
| Glu | Arg | Gln | Ala | Lys | Gln | Leu | Leu | Ile | Asp | Pro | Glu | Asp | Asp | Val | Arg |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Asn | Asn | Tle | Leu | Lve | Tur | Asn | Glu | Glu | Gly | Gly | Glv | Glu | Gl. | Acn | Ġì. |
| р | | 35 | шсч | <i>D</i> | -7- | nsp | 40 | GIU | GLY | GLY | GIY | 45 | Gru | vaħ | GLI |
| | | | | | | | • • | | | | | | | | |
| Asp | Tyr | Asp | Leu | Ser | Gln | Leu | Gln | Gln | Pro | Asp | Thr | Val | Glu | Pro | Asp |
| | 50 | | | | | 55 | | | | _ | 60 | | | | |
| | | | | | | | | | | | | | | | • |
| Ala | Ile | Lys | Pro | Val | Gly | Ile | Xaa | Arg | Met | Asp | Glu | Arg | Pro | Ile | His |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |

Ala Glu Pro Gln Tyr Pro Val Arg Ser Ala Ala Pro His Pro Gly Asp \$85\$ 90 95

Ile Gly Asp Phe Ile Asn Glu Gly Leu Lys Ala Ala Asp Asn Asp Pro 100 105 110

Thr Ala Pro Pro Tyr Asp Ser Leu Leu Val Phe Asp Tyr Glu Gly Ser 115 120 125

Gly Ser Thr Xaa Gly Ser Leu Ser Ser Leu Asn Ser Ser Ser Gly 130 135 140

Gly Glu Gln Asp Tyr Asp Tyr Leu Asn Asp Trp Gly Pro Arg Phe Lys 145 150 155 160

Lys Leu Ala Asp Met Tyr Gly Gly Gly Asp Asp 165 170

<210> 450

<211> 34

<212> PRT

<213> Homo sapiens

<400> 450

Lys Val Lys Ala Cys Cys Lys Asp Ile Phe Phe Leu Leu Glu Gly
1 5 10 15

Asn Thr Lys Arg Lys Ile Ser Phe Phe His Gly Ala Phe Asp Asn Phe 20 25 30

Ser Leu

<210> 451

<211> 148

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (43)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (89)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 451

Arg Thr Leu His Pro Ala Thr Gly Pro Arg Ala Arg Pro Pro Arg Gly $1 \hspace{1cm} 5 \hspace{1cm} 10 \hspace{1cm} 15$

Trp Arg Arg Leu Cys Ala Gln Gly Pro Ala Pro Asp Trp Asp Pro
20 25 30

Gly Val Pro Pro Gly Leu Ala Ser Cys Gly Xaa Thr Val Trp Leu His $35 \hspace{1cm} 40 \hspace{1cm} 45$

Phe Ser Asp Pro Ser Leu Gly Arg Lys Val Lys Glu Thr Gly Pro Ala 50 55 60

Ser Ala Phe Gly Leu Trp Phe Leu Asp Arg Val Leu Ser Pro Ser Pro 65 70 75 80

Pro Ser Ser Pro Asn Leu Ser His Xaa Arg Pro Leu Pro Ala Ala Pro 85 90 95

Ser Leu Leu Gly Ile Gly Ser Pro Glu Pro Pro Ser Pro Glu Pro Pro 100 105 110

Thr Pro Leu Pro Gly Pro Cys Gly Cys Trp Ala Ser His Leu Lys Glu 115 120 125

```
Gly Lys Val Val Gln Pro Glu Pro Val Glu Gln Cys Pro Val Trp Pro
    130
                        135
                                             140
Pro Lys Pro Lys
145
<210> 452
<211> 83
<212> PRT
<213> Homo sapiens
<220>
<221> SITE
<222> (19)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (28)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (64)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (77)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (79)
<223> Xaa equals any of the naturally occurring L-amino acids
<400> 452
Asp Ser His Arg Pro Arg Ala Met Arg Ala Leu Trp Val Leu Gly Leu
                                     10
                                                          15
Ser Cys Xaa Leu Leu Thr Phe Gly Ser Val Arg Xaa Asp Asp Glu Val
                                 25
Asp Val Asp Gly Thr Val Glu Glu Asp Leu Gly Lys Ser Arg Glu Gly
                             40
Ser Arg Thr Asp Asp Glu Val Val Gln Arg Glu Glu Glu Ala Ile Xaa
     50
                         55
                                             60
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Val Gly Trp Ile Lys Cys Ile Pro Asn Lys Arg Thr Xaa Glu Xaa Lys 70 75 Ser Arg Lys <210> 453 <211> 240 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (234) <223> Xaa equals any of the naturally occurring L-amino acids Gly Trp Leu Pro Cys Gly Ser Ser Val Val Pro Ala Thr Pro Gly Ser 5 Pro Pro Ser Arg Phe Trp Leu Leu Pro Ala Met Ala Leu Arg Val Leu 25 . . Leu Leu Thr Ala Leu Thr Leu Cys His Gly Phe Asn Leu Asp Thr Glu 40 Asn Ala Met Thr Phe Gln Glu Asn Ala Arg Gly Phe Gly Gln Ser Val 50 Val Gln Leu Gln Gly Ser Arg Val Val Gly Ala Pro Gln Glu Ile Val Ala Ala Asn Gln Arg Gly Ser Leu Tyr Gln Cys Asp Tyr Ser Thr Gly Ser Cys Glu Pro Ile His Leu Gln Val Pro Val Glu Ala Val Asn 100 105 Met Ser Leu Gly Leu Ser Leu Ala Ala Thr Thr Ser Pro Pro Gln Leu 120 Leu Ala Cys Gly Pro Thr Val His Gln Thr Cys Ser Glu Asn Thr Tyr 130 135 Val Lys Gly Leu Cys Phe Leu Phe Gly Ser Asn Leu Arg Gln Gln Pro 145

Gln Lys Phe Pro Glu Ala Leu Arg Gly Cys Pro Gln Glu Asp Ser Asp

170

WO 00/55173

402

PCT/US00/05881

 Ile Ala Phe
 Leu Ile Asp Gly
 Ser Gly
 Ser Ile Ile Pro His Asp Phe

 180
 185
 185
 190
 190

 Arg Arg Arg 195
 Phe Val Ser Thr Val Met Glu Gln Leu Lys Lys
 200
 200
 200
 205
 205

Ser Lys Thr Leu Phe Ser Leu Met Gln Tyr Ser Glu Glu Phe Arg Ile 210 215 220

His Phe Thr Ser Lys Ser Ser Arg Thr Xaa Leu Thr Gln Asp His Trp 225 230 235 240

<210> 454 <211> 244 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (206) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (227) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (229) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (239) <223> Xaa equals any of the naturally occurring L-amino acids

Lys Trp Cys Ser Trp Thr Leu Leu Lys Ile Trp Glu Val Thr Cys Thr

Trp Lys Leu Pro Thr Leu Ala Lys Phe Ser Pro Tyr Leu Gly Gln Met 20 25 30

Ile Asn Leu Arg Arg Leu Leu Ser His Ile His Ala Ser Ser Tyr

403

| | | 35 | | | | | 40 | | | | | 45 | | | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------------|------------|------------|------------|------------|
| Ile | Ser 50 | Pro | Glu | Lys | Glu | Glu 55 | Gln | туг | Ile | Ala | Gln 60 | Phe | Thr | Ser | Glr |
| Phe 65 | Leu | Ser | Leu | Gln | Cys 70 | Leu | Gln | Leu | Leu | Tyr 75 | Val _. | Asp | Ser | Leu | Phe 80 |
| Phe | Leu | Arg | Gly | Arg 85 | Leu | Asp | Gln | Leu | Leu 90 | Arg | His | Val | Met | Asn 95 | Pro |
| Leu | Glu | Thr | Leu 100 | Ser | Ile | Thr | Asn | Cys 105 | Arg | Leu | Ser | Glu | Gly 110 | Asp | Va] |
| Met | His | Leu 115 | Ser | Gln | Ser | Pro | Ser 120 | Val | Ser | Gln | Leu | Ser 125 | Val | Leu | Ser |
| Leu | Ser 130 | Gly | Val | Met | Leu | Thr 135 | Asp | Val | Ser | Pro | Glu 140 | Pro | Leu | Gln | Ala |
| Leu 145 | Leu | Glu | Arg | Ala | Ser 150 | Ala | Thr | Leu | Gln | Asp 155 | Leu | Val | Phe | Asp | Glu 160 |
| Cys | Gly | Ile | Thr | Asp 165 | Asp | Gln | Leu | Leu | Ala 170 | Leu | Leu | Pro | Ser | Leu 175 | Ser |
| His | Cys | Ser | Gln 180 | Leu | Thr | Thr | Leu | Ser 185 | Phe | Tyr | Gly | Asn | Ser 190 | Ile | Ser |
| Ile | Ser | Ala 195 | Leu | Gln | Ser | Leu | Leu 200 | Gln | His | Leu | Ile | Gly 205 | Xaa | Ser | Ası |
| Leu | Thr 210 | His | Val | Leu | Ţyr | Pro 215 | Val | Pro | Leu | Glu | Ser 220 | Tyr | Glu | Asp | Ile |
| His 225 | Gly | Xaa | Leu | Xaa | Leu 230 | Glu | Arg | Leu | Leu | Ser 235 | Ala | Cys | Gln | Xaa | G1r 240 |
| Gly | Val | Ala | Val | | | | | | | | | | | | |

<210> 455

<211> 195

<212> PRT

<213> Homo sapiens

<400> 455

His Glu Gly Thr Gln Ser Phe Val Phe Gln Arg Glu Glu Ile Ala Gln $1 \hspace{1cm} 5 \hspace{1cm} 10 \hspace{1cm} 15$

| Leu | Ala | Arg | Gln 20 | Tyr | Ala | Gly | Leu | Asp 25 | His | Glu | Leu | Ala | Phe 30 | Ser | Arq |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-----------------------|
| Leu | Ile | Val 35 | Glu | Leu | Arg | Arg | Leu 40 | His | Pro | Gly | His | Val 45 | Leu | Pro | Asp |
| Glu | Glu 50 | Leu | Gln | Trp | Val | Phe 55 | Val | Asn | Ala | Gly | Gly 60 | Trp | Met | Gly | Ala |
| Met 65 | Суѕ | Leu | Leu | His | Ala 70 | Ser | Leu | Ser | Glu | Туг 75 | Val | Leu | Leu | Phe | Gl _y 80 |
| Thr | Ala | Leu | Gly | Ser 85 | Arg | Gly | His | Ser | Gly 90 | Arg | Tyr | Trp | Ala | Glu 95 | Ile |
| Ser | Asp | Thr | Ile 100 | Ile | Ser | Gly | Thr | Phe 105 | His | Gln | Trp | Arg | Glu 110 | Gly | Thi |
| Thr · | Lys | Ser 115 | Glu | Val | Phe | Tyr | Pro 120 | Gly | Glu | Thr | Val | Val 125 | His | Gly | Pro |
| Gly | Glu 130 | Ala | Thr | Ala | Val | Glu 135 | Trp | Gly | Pro | Asn | Thr 140 | Trp | Met | Val | Glı |
| Tyr 145 | Gly | Arg | Gly | Val | Ile 150 | Pro | Ser | Thr | Leu | Ala 155 | Phe | Ala | Leu | Ala | Asp 160 |
| Thr | Val | Phe | Ser | Thr 165 | Gln | Asp | Phe | Leu | Thr 170 | Leu | Phe | Tyr | Thr | Leu 175 | Arg |
| Ser | Tyr | Ala | Arg 180 | Gly | Leu | Arg | Leu | Glu 185 | Leu | Thr | Thr | Tyr | Leu 190 | Phe | Gly |
| Gln | Asp | Pro | | | | | | | | | | | | | |

<210> 456

<211> 36

<212> PRT

<213> Homo sapiens

<400>,456

Leu Val Thr Leu Leu His Ala Met Gln Ala Arg Asp Lys. Thr Leu Gly
1 5 10 15

Glu Arg Leu Asn 35

<210> 457

<211> 152

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (86)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (114)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 457

Val Thr Ala Ala Ala Ser Val Arg Ala Leu Gln Val Thr Val Ala Gly
1 5 10 15

Leu Leu Leu Val Phe Phe Leu Phe Gly Ala Pro Leu Asp Ser Leu Pro 20

Ser Met Lys Ala Leu Ser Pro Val Arg Gly Cys Tyr Glu Ala Val Cys 35 40 45

Cys Leu Ser Glu Arg Ser Leu Ala Ile Ala Arg Gly Arg Gly Lys Gly 50 55 60

Pro Ala Ala Glu Glu Pro Leu Ser Leu Leu Asp Asp Met Asn His Cys 65 70 75 80

Tyr Ser Arg Leu Arg Xaa Leu Val Pro Gly Val Pro Arg Gly Thr Gln
85 90 95

Leu Ser Gln Val Glu Ile Leu Gln Arg Val Ile Asp Tyr Ile Leu Asp 100 105 110

Leu Xaa Val Val Leu Ala Glu Pro Ala Pro Gly Pro Pro Asp Gly Pro 115 120 125

His Leu Pro Ile Gln Thr Ala Glu Leu Ala Pro Glu Leu Val Ile Ser 130 135 140

Asn Asp Lys Arg Ser Phe Cys His 145 150 <210> 458

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<211> 31
<212> PRT
<213> Homo sapiens
<220>
<221> SITE
<222> (17)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (25)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (31)
<223> Xaa equals any of the naturally occurring L-amino acids
<400> 458
Leu Leu Asn Asn Phe Ile Phe Leu Glu Thr His Tyr Leu Trp Ala Cys
                                     10
Xaa Thr Trp Thr Ile Trp Pro Asn Xaa Leu Asp Lys Lys Gly Xaa
             20
                               . 25
<210> 459
<211> 157
<212> PRT
<213> Homo sapiens
<220>
<221> SITE
<222> (28)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (72)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (124)
<223> Xaa equals any of the naturally occurring L-amino acids
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<220>

<222> (130)

<221> SITE <222> (130) <223> Xaa equals any of the naturally occurring L-amino acids <400> 459 Asp Pro Arg Val Arg Glu Thr Thr Val Lys Ala Arg Ala Arg Ser Gln 5 His Ala Gly Gly Pro Glu Leu Gly Leu Ser Gln Xaa Tyr Val Thr Pro Arg Arg Pro Phe Glu Lys Ser Arg Leu Asp Gln Glu Leu Lys Leu Ile Gly Glu Tyr Gly Leu Arg Asn Lys Arg Glu Val Trp Arg Val Lys Phe Thr Leu Ala Lys Ile Arg Lys Xaa Ala Arg Glu Leu Leu Thr Leu Asp 70 Glu Lys Asp Pro Arg Arg Leu Phe Glu Gly Asn Ala Leu Leu Arg Arg Leu Val Arg Ile Gly Val Leu Asp Glu Gly Lys Met Lys Leu Asp Tyr 100 105 (Ile Leu Gly Leu Lys Met Arg Ile Leu Gly Glu Xaa Ser Ala Asp Pro Gly Xaa Ser Ser Trp Gly Trp Pro Ile His Pro Pro Cys Pro Val Leu 130 135 140 Ile Arg Gln Ala Thr Gln Val Arg Lys Gln Val Val Asn 145 150 <210> 460 <211> 136 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (119) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE

408

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<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (135)
<223> Xaa equals any of the naturally occurring L-amino acids
<400> 460
Ile Trp Ala Pro Phe Pro His His Gln Gly Ser Gly Ser Gln Val Ser
                                     10
Ser Tyr Gly Thr Gly Ala Leu Lys Ser His Ile Met Ala Ala Lys Ala
             20
                                 25
Val Ala Asn Thr Met Arg Thr Ser Leu Gly Pro Asn Gly Leu Asp Lys
Met Met Val Asp Lys Asp Gly Asp Val Thr Val Thr Asn Asp Gly Ala
     50
                         55
Thr Ile Leu Ser Met Met Asp Val Asp His Gln Ile Ala Lys Leu Met
Val Glu Leu Ser Lys Ser Gln Asp Asp Glu Ile Gly Asp Gly Asp His
                                    90
Gly Gly Cys Pro Gly Arg Arg Pro Ala Gly Arg Arg Pro Ser Ser
Cys Trp Thr Ala Ala Phe Xaa Arg Ser Gly Ser Pro Thr Val Thr Ser
                           120
Arg Xaa Pro Ala Leu Ala Xaa Glu
    130
<210> 461
<211> 390
<212> PRT
<213> Homo sapiens
<220>
<221> SITE
<222> (11)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
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<223> Xaa equals any of the naturally occurring L-amino acids

<222> (14)

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<220>
<221> SITE
<222> (375)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (382)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (383)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (386)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (387)
<223> Xaa equals any of the naturally occurring L-amino acids
<400> 461
Cys Gly Asn Trp Trp Val Pro Arg Ala Gly Xaa Asn Trp Xaa Arg Gly
Ser Arg Phe Leu Phe Val Asp Arg Cys Asp Arg His Leu Thr Met Gln
                                 25
Ile Phe Val Lys Thr Leu Thr Gly Lys Thr Ile Thr Leu Glu Val Glu
Pro Ser Asp Thr Ile Glu Asn Val Lys Ala Lys Ile Gln Asp Lys Glu
Gly Ile Pro Pro Asp Gln Gln Arg Leu Ile Phe Ala Gly Lys Gln Leu
65
                     70
Glu Asp Gly Arg Thr Leu Ser Asp Tyr Asn Ile Gln Lys Glu Ser Thr
Leu His Leu Val Leu Arg Leu Arg Gly Gly Met Gln Ile Phe Val Lys
                                105
Thr Leu Thr Gly Lys Thr Ile Thr Leu Glu Val Glu Pro Ser Asp Thr
        115
                            120
```

| Ile | Glu 130 | Asn | Val | Lys | Ala | Lys 135 | Ile | Gln | Asp | Lys | Glu 140 | Gly | Ile | Pro | Pro |
|------------|------------|------------|------------|------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Asp 145 | Gln | Gln | Arg | Leu | Ile 150 | Phe | Ala | Gly | Lys | Gln 155 | Leu | Glu | Asp | Gly | Arg 160 |
| Thr | Leu | Ser | Asp | Tyr 165 | Asn | Ile | Gln | Lys | Glu 170 | Ser | Thr | Leu | His | Leu 175 | Val |
| Leu | Arg | Leu | Arg 180 | Gly | Gly | Met | Gln | Ile 185 | Phe | Val | Lys | Thr | Leu 190 | Thr | Gly |
| Lys | Thr | Ile 195 | Thr | Leu | Glu | Val | Glu 200 | Pro | Ser | Asp | Thr | Ile 205 | Glu | Asn | Val |
| Lys | Ala 210 | Lys | Ile | Gln | Asp | Lys 215 | Glu | Gly | Ile | Pro | Pro 220 | Asp | Gln | Gln | Arg |
| Leu 225 | Ile | Phe | Ala | Gly | Lys 230 | Gln | Leu | Glu | Asp | Gly 235 | Arg | Thr | Leu | Ser | Asp 240 |
| Tyr | Asn | Ile | Gln | Lys 245 | Glu | Ser | Thr | Leu | His 250 | Leu | Val | Leu | Arg | Leu 255 | Arg |
| Gly | Gly | Met | Gln 260 | Ile | Phe | Val | Lys | Thr 265 | Leu | Thr | Gly | Lys | Thr 270 | Ile | Thr |
| Leu | Glu | Val 275 | Glu | Pro | Ser | Asp | Thr 280 | Ile | Glu | Asn | Val | Lys 285 | Ala | Lys | Ile |
| Gln | Asp 290 | Lys | Glu | Gly [^] | lle | Pro 295 | Pro | Asp | Gln | Gln | Arg 300 | Leu | Ile | Phe | Ala |
| Gly 305 | Lys | Gln | Leu | Glu | Asp 310 | Gly | Arg | Thr | Leu | Ser 315 | Asp | туr | Asn | Ile | Gln 320 |
| | | | | 325 | His | | | | 330 | | | | | 335 | |
| Ile | Phe | Val | Lys 340 | Thr | Leu | Thr | Gly | Lys 345 | Thr | Ile | Thr | Leu | Glu 350 | Val | Glu |
| Pro | Ser | Asp 355 | Thr | Ile | Glu | Asn | Val 360 | Lys | Ala | Arg | Ser | Arg 365 | Gln | Gly | Arg |
| His | Pro 370 | Pro | Asp | Gln | Gln | Xaa 375 | Leu | Ile | Leu | Leu | Gly 380 | Lys | Xaa | Xaa | Lys |
| Trp | Xaa | Xaa | Pro | Phe | Asp | | | | | | | | | | |

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<210> 462
<211> 171
<212> PRT
<213> Homo sapiens
<220>
<221> SITE
<222> (74)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (135)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (142)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (155)
<223> Xaa equals any of the naturally occurring L-amino acids
<400> 462
Cys Ser Thr Val Arg Ile Pro Gly Ser Thr His Ala Ser Gly Leu Ser
 1
                  5
Arg Arg Ala Ser Pro Val Tyr Leu Ala Ser Met Ser Gly Arg Gly Lys
                                 25
Thr Gly Gly Lys Ala Arg Ala Lys Ala Lys Ser Arg Ser Ser Arg Ala
                           40
Gly Leu Gln Phe Pro Val Gly Arg Val His Arg Leu Leu Arg Lys Gly
     50
His Tyr Ala Glu Arg Val Gly Ala Gly Xaa Pro Val Tyr Leu Ala Ala
Val Leu Glu Tyr Leu Thr Ala Glu Ile Leu Glu Leu Ala Gly Asn Ala
Ala Arg Asp Asn Lys Lys Thr Arg Ile Ile Pro Arg His Leu Gln Leu
           100
                                105
Ala Ile Arg Asn Asp Glu Glu Leu Asn Lys Leu Leu Gly Gly Val Thr
                          120
```

412

Ile Ala Gln Gly Arg Arg Xaa Ala Gln His Pro Gly Arg Xaa Cys Cys 130 135 140

Pro Arg Arg Pro Ala Pro Pro Trp Gly Arg Xaa Pro Phe Gly Gln 145 150 155 160

Glu Arg Ala Thr Lys Ala Ser Gln Gly Val Leu 165 170

<210> 463

<211> 433

<212> PRT

<213> Homo sapiens

<400> 463

Arg Val Arg Ala Pro Pro Arg Pro Pro Leu Gly Pro Ser Arg Pro Ser 1 5 10 15

His His Val His Pro Leu Gln Leu Pro Gly Ile Arg Glu Val Thr Ile 20 25 30

Asn Gln Ser Leu Leu Ala Pro Leu Arg Leu Asp Ala Asp Pro Ser Leu 35 40 45

Gln Arg Val Arg Gln Glu Glu Ser Glu Gln Ile Lys Thr Leu Asn Asn 50 55 60

Lys Phe Ala Ser Phe Ile Asp Lys Val Arg Phe Leu Glu Gln Gln Asn 65 70 75 80

Lys Leu Leu Glu Thr Lys Trp Thr Leu Leu Gln Glu Gln Lys Ser Ala 85 90 95

Lys Ser Ser Arg Leu Pro Asp Ile Phe Glu Ala Gln Ile Ala Gly Leu . 100 105 110

Arg Gly Gln Leu Glu Ala Leu Gln Val Asp Gly Gly Arg Leu Glu Ala 115 120 125

Glu Leu Arg Ser Met Gln Asp Val Val Glu Asp Phe Lys Asn Lys Tyr 130 135 140

Glu Asp Glu Ile Asn Arg Arg Thr Ala Ala Glu Asn Glu Phe Val Val 145 150 155 160

Leu Lys Lys Asp Val Asp Ala Ala Tyr Met Ser Lys Val Glu Leu Glu 165 170 175

| А1а | Lys | Val | 180 | Ala | Leu | Asn | Asp | G1u 185 | He | Asn | Phe | Leu | 190 | Thr | Leu |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Asn | Glu | Thr 195 | Glu | Leu | Thr | Glu | Leu 200 | Gln | Ser | Gln | Ile | Ser 205 | Asp | Thr | Ser |
| Val | Val 210 | Leu | Ser | Met | Asp | Asn 215 | Ser | Arg | Ser | Leu | Asp 220 | Leu | Asp | Gly | Ile |
| Ile 225 | Ala | Glu | Val | Lys | Ala 230 | Gln | Tyr | Glu | Glu | Met 235 | Ala | Lys | Cys | Ser | Arg 240 |
| Ala | Glu | Ala | Glu | Ala 245 | Trp | Tyr | Gln | Thr | Lys 250 | Phe | Glu | Thr | Leu | Gln 255 | Ala |
| | Ala | - | 260 | | - | | | 265 | | | | | 270 | | |
| | Glu | 275 | | | | | 280 | | | | | 285 | | | |
| | Lys 290 | | | | | 295 | | | | | 300 | | | | |
| 305 | Arg | | | | 310 | | | | | 315 | | | | | 320 |
| | Glu | | | 325 | | | | | 330 | | | | | 335 | |
| | Glu | | 340 | | | | | 345 | | | | | 350 | | |
| | Ala | 355 | | | | | 360 | | | | | 365 | | | |
| | 370 | | | | | 375 | | | | | 380 | | | | |
| 385 | Ser | | | | 390 | | | | | 395 | | | | | 400 |
| | Ser | | | 405 | | | | | 410 | • | | | | 415 | |
| rys | Ala | Tyr | Ser 420 | 116 | Arg | Thr | Ala | Ser 425 | Ala | ser | Arg | Arg | Ser 430 | Ala | Arg |

Asp

```
<210> 464
<211> 121
<212> PRT
<213> Homo sapiens
<220>
<221> SITE
<222> (50)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (64)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (110)
<223> Kaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (114)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (115)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (117)
<223> Xaa equals any of the naturally occurring L-amino acids
<400> 464
Gly Ser Gly Cys Val Phe Ala Ile Leu Gly Arg Arg Cys Ser Árg Pro
Trp Arg Ile Trp Pro Gly Glu Pro Leu Gln Arg Ala Pro Pro Ala Ala
                                 25
Gly Thr Arg Trp Pro His Gly His Arg Ser Ser Pro Val Gly Thr Pro
Gly Xaa Ala Pro Asn Val Pro Ala Ile Trp Gln Gln Pro Leu Trp Xaa
                         55
Glu Tyr Ser Cys Glu Tyr Gly Ser Met Lys Phe Tyr Ala Leu Cys Gly
```

415

65 70 75 80

Phe Gly Gly Val Leu Ser Cys Gly Leu Thr His Thr Ala Val Val Pro

Leu Asp Leu Val Lys Cys Arg Met Gln Val Asp Pro Gln Xaa Tyr Lys 100 105 110

Gly Xaa Xaa Asn Xaa Ile Leu Ile Asn 115 120

<210> 465

<211> 68

<212> PRT

<213> Homo sapiens

<400> 465

Arg Ile Pro Ala Pro Ala Ser Ser Arg His Ser Gly Gly Arg Cys Ala
1 5 10 15

Ala Gly Pro Arg Gly Pro Pro Ala Thr Ala Ser Arg Ala Leu Arg Ala 20 25 30

Val His Arg Pro Leu Asp Ala Ala Arg Gly Arg Thr Gly Ser Thr Ser 35 40 45

His Leu Cys Ser Ser Ser Tyr Thr Ile Gly Cys Leu Leu Trp Phe Ser 50 60

Gln Lys Ala Met 65

<210> 466

<211> 224

<212> PRT

<213> Homo sapiens

<400> 466

Ala Thr Ile Leu Glu Arg Glu Ala Glu Gln Ser Arg Leu Gly Ala Thr $1 \hspace{1cm} 5 \hspace{1cm} 10 \hspace{1cm} 15$

Glu Arg Ala Ala Ala Ala Met Asn Pro Glu Tyr Asp Tyr Leu Phe 20 25 30

Lys Leu Leu Ile Gly Asp Ser Gly Val Gly Lys Ser Cys Leu Leu 35 40 45 Leu Arg Phe Ala Asp Asp Thr Tyr Thr Glu Ser Tyr Ile Ser Thr Ile
50 60

Gly Val Asp Phe Lys Ile Arg Thr Ile Glu Leu Asp Gly Lys Thr Ile 65 70 75 80

Lys Leu Gln Ile Trp Asp Thr Ala Gly Gln Glu Arg Phe Arg Thr Ile 85 90 95

Thr Ser Ser Tyr Tyr Arg Gly Ala His Gly Ile Ile Val Val Tyr Asp 100 105 110

Val Thr Asp Gln Glu Ser Tyr Ala Asn Val Lys Gln Trp Leu Gln Glu 115 120 125

Ile Asp Arg Tyr Ala Ser Glu Asn Val Asn Lys Leu Leu Val Gly Asn 130 135 140

Lys Ser Asp Leu Thr Thr Lys Lys Val Val Asp Asn Thr Thr Ala Lys 145 150 155 160

Glu Phe Ala Asp Ser Leu Gly Ile Pro Phe Leu Glu Thr Ser Ala Lys 165 170 175

Asn Ala Thr Asn Val Glu Gln Ala Phe Met Thr Met Ala Ala Glu Ile 180 $$185\$

Lys Lys Arg Met Gly Pro Gly Ala Ala Ser Gly Gly Glu Arg Pro Asn 195 200 205

Leu Lys Ile Asp Ser Thr Pro Val Lys Pro Ala Gly Gly Gly Cys Cys 210 215 220

<210> 467

<211> 76

<212> PRT

<213> Homo sapiens

<400> 467

Ser Glu Ala Pro Gly Glu Ser Val Gly Thr Thr Pro Glu Ala Gln Met

1 10 15

Lys Thr Gly Pro Phe Ala Glu His Ser Asn Gln Leu Trp Asn Ile Ser

Ala Val Pro Ser Trp Ser Lys Val Asn Gln Gly Leu Ile Arg Met Tyr

417

35 40 45 Lys Ala Glu Cys Leu Glu Lys Phe Pro Val Ile Gln His Phe Lys Phe 50 55 Gly Ser Leu Leu Pro Ile His Pro Val Thr Ser Gly 70 <210> 468 <211> 111 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (31) <223> Xaa equals any of the naturally occurring L-amino acids <220> · <221> SITE <222> (35) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (47) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (49) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (78) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (97) <223> Xaa equals any of the naturally occurring L-amino acids Ser Leu Ala Arg Thr Gly Pro Arg Ser Leu Ala Arg Pro Cys Arg Arg 10

Arg Pro Ala His Arg His Pro Leu Gln Pro Cys Pro Pro Gly Xaa Cys

25

Pro Arg Xaa Pro Thr Ala Asp Val Arg Arg Pro Arg His Arg Xaa Arg 35 40 45

Xaa Glu Leu His Ala His Asn Val Thr Ser Pro Pro Ala Pro Thr Ala 50 60

Trp Ala Ala Pro Ala Pro Gln His Gln Pro Gln Pro Leu Xaa Leu Val 65 70 75 80

Pro Gly Arg Arg Val Cys Ser Arg Leu Leu Pro Arg Cys Ala Cys Gly 85 90 95

Xaa Cys Cys Pro Gly Val Ala Leu Ala Gly Arg Ile Pro Trp Asn 100 105 110

<210> 469

<211> 459

<212> PRT

<213> Homo sapiens

<400> 469

Pro Arg Val Arg Pro Arg Val Arg Pro Arg Val Arg Leu Ser Ser Pro 1 5 10 15

Ser Pro Val Cys Leu Pro Pro Ala Ala Ala Thr Met Thr Thr Ser Ile 20 25 30

Arg Gln Phe Thr Ser Ser Ser Ile Lys Gly Ser Ser Gly Leu Gly
35 40 45

Gly Gly Ser Ser Arg Thr Ser Cys Arg Leu Ser Gly Gly Leu Gly Ala
50 60

Gly Ser Cys Arg Leu Gly Ser Ala Gly Gly Leu Gly Ser Thr Leu Gly 65 70 75 80

Gly Ser Ser Tyr Ser Ser Cys Tyr Ser Phe Gly Ser Gly Gly Tyr
85 90 95

Gly Ser Ser Phe Gly Gly Val Asp Gly Leu Leu Ala Gly Gly Lys 100 105 110

Ala Thr Met Gln Asn Leu Asn Asp Arg Leu Ala Ser Tyr Leu Asp Lys 115 120 125

Val Arg Ala Leu Glu Glu Ala Asn Thr Glu Leu Glu Val Lys Ile Arg 130 135 140

| 145 | 110 | Tyt | GIII | ALG | 150 | Ala | PIO | GIY | PIO | 155 | ALG | Asp | Tyt | 361 | 160 |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Tyr | туr | Arg | Thr | Ile 165 | Glu | Glu | Leu | Gln | Asn 170 | Lys | Ile | Leu | Thr | Ala 175 | Thr |
| Val | Asp | Asn | Ala 180 | Asn | Ile | Leu | Leu | Gln 185 | Ile | Asp | Asn | Ala | Arg 190 | Leu | Ala |
| Ala | Asp | Asp 195 | Phe | Arg | Thr | Lys | Phe 200 | Glu | Thr | Glu | Gln | Ala 205 | Leu | Arg | Leu |
| Ser | Val 210 | Glu | Ala | Asp | Ile | Asn 215 | Gly | Leu | Arg | Arg | Val 220 | Leu | Asp | Glu | Leu |
| Thr 225 | Leu | Ala | Arg | Ala | Asp 230 | Leu | Glu | Met | Gln | Ile 235 | Glu | Asn | Leu | Lys | Glu 240 |
| Glu | Leu | Ala | Tyr | Leu 245 | Lys | Lys | Asn | His | Glu 250 | Glu | Glu | Met | Asn | Ala 255 | Leu |
| Arg | Gly | Gln | Val 260 | Gly | Gly | Glu | Ile | Asn 265 | Val | Glu | Met | Asp | Ala 270 | Ala | Pro |
| Gly | Val | Asp 275 | Leu | Ser | Arg | Ile | Leu 280 | Asn | Glu | Met | Arg | Asp 285 | Gln | Туr | Glu |
| Lys | Met 290 | Ala | Glu | Lys | Asn | Arg 295 | Lys | Asp | Ala | Glu | Asp 300 | Trp | Phe | Phe | Ser |
| Lys 305 | Thr | Glu | Glu | Leu | Asn 310 | Arg | Glu | Val | Ala | Thr 315 | Asn | Ser | Glu | Leu | Val 320 |
| Gln | Ser | Gly | Lys | Ser 325 | Glu | Ile | Ser | Glu | Leu 330 | Arg | Arg | Thr | Met | Gln 335 | Ala |
| Leu | Glu | Ile | Glu 340 | Leu | Gln | Ser | Gln | Leu 345 | Ser | Met | Lys | Ala | Ser 350 | Leu | Glu |
| Gly | Asn | Leu 355 | Ala | Glu | Thr | Glu | Asn 360 | Arg | Tyr | Cys | Val | Gln 365 | Leu | Ser | Gln |
| Ile | Gln 370 | Gly | Leu | Ile | Gly | Ser 375 | Val | Glu | Glu | Gln | Leu 380 | Ala | Gln | Leu | Arg |
| Cys 385 | Glu | Met | Glu | Gln | Gln 390 | Asn | Gln | Glu | Tyr | Lys 395 | Ile | Leu | Leu | Asp | Val 400 |
| Lys | Thr | Arg | Leu | Glu 405 | Gln | Glu | Ile | Ala | Thr 410 | Tyr | Arg | Arg | Leu | Leu 415 | Glu |

Gly Glu Asp Ala His Leu Thr Gln Tyr Lys Lys Glu Pro Val Thr Thr 420 425 430

Arg Gln Val Arg Thr Ile Val Glu Glu Val Gln Asp Gly Lys Val Ile
435 440 445

Ser Ser Arg Glu Gln Val His Gln Thr Thr Arg 450 455

<210> 470

<211> 158

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (158)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 470

Pro Pro Pro Pro Pro Pro Glu Leu Cys Ser Met Ala Ser Arg Arg
1 5 10 15

Met Glu Thr Lys Pro Val Ile Thr Cys Leu Lys Thr Leu Leu Ile Ile 20 25 30

Tyr Ser Phe Val Phe Trp Ile Thr Gly Val Ile Leu Leu Ala Val Gly
35 40 45

Val Trp Gly Lys Leu Thr Leu Gly Thr Tyr Ile Ser Leu Ile Ala Glu 50 . 55

Asn Ser Thr Asn Ala Pro Tyr Val Leu Ile Gly Thr Gly Thr Thr Ile 65 70 75 80

Val Val Phe Gly Leu Phe Gly Cys Phe Ala Thr Cys Arg Gly Ser Pro 85 90 95

Trp Met Leu Lys Leu Tyr Ala Met Phe Leu Ser Leu Val Phe Leu Ala 100 105 110

Glu Leu Val Ala Gly Ile Ser Gly Phe Val Phe Arg His Glu Ile Lys 115 120 125

Asp Thr Phe Leu Arg Thr Tyr Thr Asp Ala Met Gln Thr Tyr Asn Gly
130 140

<210> 471

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<211> 59
<212> PRT
<213> Homo sapiens
<400> 471
Val Leu Phe Phe Tyr Glu Cys Pro Asn Leu Cys Phe Pro Leu Pro Ser
Gln Thr Val Trp Pro Val Glu Ser Val Trp Phe Val Phe Ile Ser Pro
                                25
Ser Phe Leu Glu Gln Gly Leu Arg Pro Cys His Ile Ser Tyr Ala Leu
                             40
His Pro Arg Leu Phe Trp Thr Leu Lys Val Asp
<210> 472
<211> 320
<212> PRT
<213> Homo sapiens
<220>
<221> SITE
<222> (48)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (49)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (53)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (105)
<223> Xaa equals any of the naturally occurring L-amino acids
<400> 472
Asp Pro Asp Glu Val Phe Pro Val Cys Leu Pro Leu Thr Gly Asp Ala
                                    10
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| Gly | Glu | Asp | Gly 20 | Gly | Lys | Met | Leu | His 25 | Leu | Pro | Glu | Trp | Pro 30 | Glu | Gln |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Pro | Pro | Gly 35 | Gly | Pro | Ala | Ala | Leu 40 | Gln | Val | Arg | Gly | Ala 45 | Glu | Asp | Xaa |
| Xaa | Leu 50 | Ser | Phe | Xaa, | Asp | Cys 55 | Glu | Ser | Leu | Gln | Ala 60 | Val | Phe | Asp | Pro |
| Ala 65 | Ser | Cys | Pro | His | Met 70 | Leu | Arg | Ala | Pro | Ala 75 | Arg | Val | Leu | Gly | Glu 80 |
| Ala | Val | Leu | Pro | Phe 85 | Ser | Pro | Ala | Leu | Ala 90 | Glu | Val | Thr | Leu | Gly- 95 | Ile |
| Gly | Arg | Gly | Ala 100 | Gly | Ser | Ser | Trp | Xaa 105 | Туr | His | Glu | Glu | Glu 110 | Ala | Asp |
| Ser | Thr | Ala 115 | Lys | Ala | Met | Val | Thr 120 | Glu | Met | Cys | Leu | Gly 125 | Glu | Glu | Asp |
| Phe | Gln 130 | Gln | Leu | Gln | Ala | Gln 135 | Glu | Gly | Val | Ala | 11e 140 | Thr | Phe | Cys | Leu |
| Lys 145 | Glu | Phe | Arg | Gly | Leu 150 | Leu | Ser | Phe | Ala | Glu 155 | Ser | Ala | Asn | Leu | Asn 160 |
| Leu | Ser | Ile | His | Phe 165 | Asp | Ala | Pro | Gly | Arg 170 | Pro | Ala | Ile | Phe | Thr 175 | Ile |
| Lys | Asp | Ser | Leu 180 | Leu | Asp | Gly | His | Phe 185 | Val · | Leu | Ala | Thr | Leu 190 | Ser | Asp |
| | | 195 | | Ser | | _ | 200 | | | | | 205 | | | |
| | 210 | | | Gln | | 215 | | | | | 220 | | | | |
| Asn 225 | Asp | Asp | Ile | Asp | Ser 230 | Tyr | Met | Ile | Ala | Met 235 | Glu | Thr | Thr | Ile | Gly 240 |
| Asn | Glu | Gly | Ser | Arg 245 | Val | Leu | Pro | Ser | Ile 250 | Ser | Leu | Ser | Pro | Gly 255 | Pro |
| Gln | Pro | Pro | Lys 260 | Ser | Pro | Gly | Pro | His 265 | Ser | Glu | Glu | Glu | Asp 270 | Glu | Ala |
| Glu | Pro | Ser 275 | Thr | Val | Pro | Gly | Thr 280 | Pro | Pro | Pro | Lys | Lys 285 | Phe | Arg | Ser |

423

Leu Phe Phe Gly Ser Ile Leu Ala Pro Val Arg Ser Pro Gln Gly Pro 290 295 300

Ser Leu Cys Trp Arg Lys Thr Val Arg Val Lys Ala Glu Pro Arg Thr 305 310 315 320

<210> 473

<211> 331

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (24)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (.283)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (299)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (324)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 473

Pro Pro Cys Ala Val Pro Gly Pro Arg Leu Ser Pro Lys Leu Arg Thr
1 5 10 15

Pro Ser Asn Ser Arg Glu Ser Xaa Ile Cys Val Ser Gly Arg Ala Glu
20 25 30

Ala Leu Thr Phe Arg His Gly Ala Glu Gly Ser Asp Arg Arg Gln
35 40 45

Arg Arg Glu Gly Val Leu Gly Pro Ala Leu Leu Cys Arg Pro Trp Glu 50 60

Val Leu Gly Ala His Glu Val Pro Ser Arg Asn Ile Phe Ser Glu Gln

| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Thr | Ile | Pro | Pro | Ser 85 | Ala | Lys | Tyr | Gly | Gly 90 | Arg | His | Thr | Val | Thr 95 | Met |
| Ile | Pro | Gly | Asp 100 | _ | Ile | Gly | Pro | Glu 105 | Leu | Met | Leu | His | Val 110 | Lys | Ser |
| Val | Phe | Arg 115 | His | Ala | Cys | Val | Pro 120 | Val | Asp | Phe | Glu | Glu 125 | Val | His | Val |
| Ser | Ser 130 | Asn | Ala | Asp | Glu | Glu 135 | Asp | Ile | Arg | Asn | Ala 140 | Ile | Met | Ala | Ile |
| Arg 145 | Arg | Asn | Arg | Val | Ala 150 | Leu | Lys | Gly | Asn | 11e 155 | Glu | Thr | Asn | His | Asn 160 |
| Leu | Pro | Pro | Ser | His 165 | Lys | Ser | Arg | Asn | Asn 170 | Ile | Leu | Arg | Thr | Ser 175 | Leu |
| Asp | Leu | Tyr | Ala 180 | Asn | Val | Ile | His | Cys 185 | Lys | Ser | Leu | Pro | Gly 190 | Val | Val |
| Thr | Arg | His 195 | Lys | Asp | Ile | Asp | Ile 200 | Leu | Ile | Val | Arg | Glu 205 | Asn | Thr | Glu |
| Gly | Glu 210 | Tyr | Ser | Ser | Leu | Glu 215 | His | Glu | Ser | Val | Ala 220 | Gly | Val | Val | Glu |
| Ser 225 | Leu | Lys | Ile | Ile | Thr 230 | Lys | Ala | Lys | Ser | Leu 235 | Arg | Ile | Ala | Glu | Tyr 240 |
| Ala | Phe | Lys | Leu | Ala 245 | Gln | Glu | Ser | Gly | Arg 250 | Lys | Lys | Val | Thr | Ala 255 | Val |
| His | Lys | Ala | Asn 260 | Ile | Met | Lys | Leu | Gly 265 | Asp | Gly | Leu | Phe | Leu 270 | Gln | Cys |
| Cys | Arg | Glu 275 | Val | Ala | Ala | Arg | Туг 280 | Pro | Gln | Xaa | Thr | Phe 285 | Glu | Asn | Met |
| Ile | Val 290 | Asp | Asn | Thr | Thr | Met 295 | Gln | Leu | Val | Xaa | Arg 300 | Pro | Gln | Gln | Phe |
| Asp 305 | Val | Met | Val | Met | Pro 310 | Asn | Leu | Tyr | Gly | Asn 315 | Ile | Val | Lys | Gln | Cys 320 |
| Leu | Arg | Gly | Xaa | Gly 325 | Arg | Gly | Pro | Lys | Leu 330 | Val | | | | | |

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<210> 474
<211> 30
<212> PRT
<213> Homo sapiens
<400> 474
Thr Pro Ile Ser Thr Lys Asn Thr Lys Ile Ser Gln Ala Arg Trp Arg
                                    10
Ala His Val Val Pro Ala Thr Arg Glu Ala Asp Ala Glu Glu
            20
                                25
<210> 475
<211> 124
<212> PRT
<213> Homo sapiens
<220>
<221> SITE
<222> (110)
<223> Xaa equals any of the naturally occurring L-amino acids
Thr Gln Phe Ser Leu Ser Pro Val Glu Thr Ile Tyr Thr Ile Leu Cys
Ile Asn Val Tyr Thr Leu Pro Ile Cys Ile His Ile Tyr Ile Val Tyr
                                 25
Ile Leu Tyr Met Tyr Arg Cys Val Tyr Val His Ile Tyr Thr His Ala
                            40
His Asn Lys Ile Arg Cys Ser Leu Gln Ile Gln Met Leu Ile Thr Lys
                        55
Pro Asp Ala Thr Gln Thr Ala Ala Glu Glu Thr Arg Leu Asp Ser Cys
                                        75
Asn Arg Ser Gln Lys Ile Lys Thr Ala Thr Cys Ser Asp Phe Gly His
                 85
                                     90
Phe Cys Met Phe Ile Lys Asn Gly Phe Val Thr Arg Lys Xaa Arg Thr
                               105
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Ser Val Ser Glu Lys Gly Arg Trp Gly Glu Pro Ser

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426

10

PCT/US00/05881

<210> 476 <211> 64 <212> PRT <213> Homo sapiens <400> 476 Asn Gly Tyr Leu Val Phe Pro Arg Lys Asn Ser Phe Leu Leu Ile Phe Gly Leu Phe Val Tyr Leu Glu Thr Asn Leu Asp Ser Leu Pro Leu Val

Asp Thr His Ser Lys Arg Thr Leu Leu Ile Lys Thr Val Glu Thr Arg

25

Asp Gly Gln Val Ile Asn Glu Thr Ser Gln His His Asp Asp Leu Glu 55

<210> 477 <211> 107 <212> PRT <213> Homo sapiens

Val Leu Thr Val Asp Ala Arg Asn His Gly Asp Ser Pro His Ser Pro 5 10

Asp Met Ser Tyr Glu Ile Met Ser Gln Asp Leu Gln Asp Leu Leu Pro 25

Gln Leu Gly Leu Val Pro Cys Val Val Gly His Ser Met Gly Gly 40

Lys Thr Ala Met Leu Leu Ala Leu Gln Arg Pro Glu Leu Val Glu Arg 50

Leu Ile Ala Val Asp Ile Ser Pro Val Glu Ser Thr Gly Val Ser His

Phe Ala Thr Tyr Val Ala Ala Met Arg Ala Ile Asn Ile Ala Asp Arg 90

Leu Ala Pro Leu Pro Cys Pro Lys Thr Gly Gly 100 105

| | 0> 4 1> 2 | | | | | | | | | | | | | | |
|------------|--------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| <21 | 2> P | RT | | | | | | | | | | | | | |
| | - | omo : | sapi | ens | | | | | | | | | | | |
| <22 | | | | | | | | | | | | | | | |
| <22. | 1> S | ITE | | | | | | | | | | | | | |
| <22 | 2> (| 281) | | | | | | | | | | | | | |
| <22 | 3> X | aa e | qual | s an | y of | the | nati | ıral: | ly o | ccur | ring | L-ar | nino | acio | is |
| | 0> 4 | | | | | | | | | | | | | | |
| Arg | Glu | Leu | Gly | Gly | Thr | Leu | Leu | Ser | Ala | Ile | Glu | Val | Glu | Gly | Ala |
| 1 | | | | . 5 | | | | | 10 | | | | | 15 | |
| Lys | Met | Gln | Ser 20 | Asn | Lys | Thr | Phe | Asn 25 | Leu | Glu | Lys | Gln | Asn 30 | His | Thr |
| Pro | Arg | Lys 35 | His | His | Gln | His | His 40 | His | Gln | Gln | Gln | His 45 | His | Gln | Gln |
| Gln | Gln 50 | Gln | Gln | Pro | Pro | Pro 55 | Pro | Pro | Ile | Pro | Ala 60 | Asn | Gly | Gln | Gln |
| Ala 65 | Ser | Ser | Gln | Asn | Glu 70 | Gly | Leu | Thr | Ile | Asp 75 | Leu | Lys | Asn | Phe | Arg 80 |
| Lys | Pro | Gly | Glu | Lys 85 | Thr | Phe | Thr | Gln | Arg .90 | Ser | Arg | Leu | Phe | Val 95 | Gly |
| Asn | Leu | Pro | Pro 100 | Asp | Ile | Thr | Glu | Glu 105 | Glu | Met | Arg | Lys | Leu 110 | | Glu |
| Lys | Tyr | Gly 115 | Lys | Ala | Gly | Glu | Val 120 | Phe | Ile | His | Lys | Asp 125 | Lys | Gly | Phe |
| Gly | Phe 130 | Ile | Arg | Leu | Glu | Thr 135 | Arg | Thr | Leu | Ala | Glu 140 | Ile | Ala | Lys | Val |
| Glu 145 | Leu | Asp | Asn | Met | Pro 150 | Leu | Arg | Gly | Lys | Gln 155 | Leu | Arg | Val | Arg | Phe 160 |
| Ala | Cys | His | Ser | Ala 165 | Ser | Leu | Thr | Val | Arg 170 | Asn | Leu | Pro | Gln | Туг 175 | Val |
| Ser | Asn | Glu | Leu 180 | Leu | Glu | Glu | Ala | Phe 185 | Ser | Val | Phe | Gly | Gln 190 | Val | Glu |
| Arg | Ala | Val 195 | Val | Ile | Val | Asp | Asp 200 | Arg | Gly | Arg | Pro | Ser 205 | Gly | Lys | Gly |

Ile Val Glu Phe Ser Gly Lys Pro Ala Ala Arg Lys Ala Leu Asp Arg Cys Ser Glu Gly Ser Phe Leu Leu Thr Thr Phe Pro Arg Pro Val Thr 225 230 235 Val Glu Pro Met Asp Gln Leu Asp Asp Glu Glu Gly Leu Pro Glu Lys Leu Val Ile Lys Asn Gln Gln Phe His Lys Glu Arg Glu Gln Pro Pro 265 Arg Phe Ala Gln Pro Gly Ser Phe Xaa Val 275 280 <210> 479 <211> 289 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (206) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (215) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (218) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (285) <223> Xaa equals any of the naturally occurring L-amino acids Ala Val Pro Val Arg Asn Ser Arg Val Asp Pro Arg Val Arg Val Cys Gly Pro Leu Ser Ala Pro Arg Gly Ser Arg Arg Pro Thr Val Pro Gly

Thr Pro Ala Cys Leu Ala Arg Pro Ala Ala Gln Gly Phe Ser Ala Ala

| | | 35 | | | | | 40 | | | | | 45 | | | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|---------------------|------------|------------|------------|
| Leu | Pro 50 | Val | Arg | Trp | Thr | Gly 55 | Arg | Arg | Ala | Gly | Pro 60 | Ser | Arg | Pro | Val |
| Pro 65 | Ile | Gly | Thr | Pro | Ser 70 | Arg | Ala | Ala | Asp | Pro 75 | Ser | Gln | Gly | Glu | Met 80 |
| Ser | Ala | Asp | Ala | Ala 85 | Ala | Gly | Ala | Pro | Leu 90 | Pro | Arg | Leu | Cys | Cys 95 | Leu |
| Glu | Lys | Gly | Pro 100 | Asn | Gly | Tyr | Gly | Phe 105 | His | Leu | His | Gly | Glu 110 | Lys | Gly |
| Lys | Leu | Gly 115 | Gln | туг | Ile | Arg | Leu 120 | Val | Glu | Pro | Gly | Ser 125 | Pro | Ala | Glu |
| Lys | Ala 130 | Gly | Leu | Leu | Ala | Gly 135 | Asp | Arg | Leu | Val | Glu 140 | Val | Asn | Gly | Glu |
| Asn 145 | Val | Glu | Lys | Glu | Thr 150 | His | Gln | Gln | Val | Val 155 | Ser | Arg | Ile | Arg | Ala 160 |
| Ala | Leu | Asn | Ala | Val 165 | Arg | Leu | Leu | Val | Val 170 | Asp | Pro | Glu | Thr | Asp 175 | Glu |
| Gln | Leu | Gln | Lys 180 | Leu | Gly | Val | Gln | Val 185 | Arg | Glu | Glu | Leu | Leu 190 | Arg | Ala |
| Gln | Glu | Ala 195 | Pro | Gly | Gln | Ala | Glu 200 | Pro | Pro | Ala | Ala | Ala 2 0 5 | Xaa | Val | Gln |
| Gly | Ala 210 | Gly | Asn | Glu | Asn | Xaa 215 | Pro | Arg | Xaa | Ala | Asp 220 | Lys | Ser | His | Pro |
| Glu 225 | Gln | Arg | Glu | Leu | Arg 230 | Pro | Arg | Leu | Cys | Thr 235 | Met | Lys | Lys | Gly | Pro 240 |
| Ser | Gly | Tyr | Gly | Phe 245 | Asn | Leu | His | Ser | Asp 250 | Lys | Ser | Lys | Pro | Gly 255 | Gln |
| Phe | Ile | Arg | Ser 260 | Val | Asp | Pro | Asp | Ser 265 | Pro | Ala | Glu | Ala | Ser 270 | Gly | Leu |
| Arg | Ala | Gln 275 | Asp | Arg | Ile | Val | Glu 280 | Val | Met | Leu | Leu | Xaa 285 | Ser | Leu | Pro |

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<211> 44
<212> PRT
<213> Homo sapiens
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Gly Ser Thr His Ala Ser Gly Arg Asn Glu Gly Pro Pro Ala Lys Thr
                 5
                                     10
Lys Ser Trp Val Gly Pro Thr Leu His Phe His Arg Lys Ser Glu His
                                 25
Leu Val Gly Leu Lys Val Leu Cys Cys Phe Arg Leu
<210> 481
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Ser Ile Xaa His Xaa Arg Lys Xaa Xaa Xaa Thr Val Arg Ser Asp Ser
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<220>
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<222> (131)

431

PCT/US00/05881

Arg Val Asp Pro Arg Ser Asp Asp Phe Thr Pro Leu Glu Ile Leu Trp Thr Phe Ser Ile Tyr Leu Glu Ser Val Ala Ile Leu Pro Gln Leu Phe 40 Met Val Ser Lys Thr Gly Glu Ala Glu Thr Ile Thr Ser His Tyr Leu 55 Phe Ala Leu Gly Val Tyr Arg Thr Leu Tyr Leu Phe Asn Trp Ile Trp Arg Tyr His Phe Glu Gly Phe Phe Asp Leu Ile Ala Ile Val Ala Gly Leu Val Gln Thr Val Leu Tyr Cys Asp Phe Phe Tyr Leu Tyr Ile Thr 105 Lys Val Leu Lys Gly Lys Lys Leu Ser Leu Pro Ala 120 <210> 482 <211> 131 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (122) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (124) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (127) <223> Xaa equals any of the naturally occurring L-amino acids

<400> 482 Cys Ser Ser Arg Gly Ala His His Ser His Cys Asp Arg Leu Pro His

<223> Xaa equals any of the naturally occurring L-amino acids

1 10 15 Ser Pro Trp Pro Gly Leu Arg Glu Val Glu Leu Leu Ala Ser Val His 20 25 Thr Glu Gln Met Glu Glu Glu Leu Ala Leu Gly Pro Arg Gly Gln Gly 40 Gly Ala Ser Leu Ala Gly Arg Asp Gly Arg Ser Ala Gly Ala Gly Ser 55 Tyr Gly Ala Leu Ala Asn Ser Ala Trp Gly Gly Pro Arg Lys Val Ala 70 Ser Ala Ser Ala Ala Ser Thr Leu Ser Glu Pro Pro Arg Arg Thr 85 90 Gln Glu Ser Arg Thr Arg Thr Arg Ala Leu Gly Leu Pro Thr Leu Pro 105 Met Glu Lys Leu Ala Ala Ser Asn Arg Xaa Pro Xaa Gly Leu Xaa Gly 115 120 125 Pro Gly Xaa 130 <210> 483 <211> 221 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (168) <223> Kaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (174) <223> Xaa equals any of the naturally occurring L-amino acids Lys Lys Pro Pro Ile Thr His Pro Ser Thr Pro Ala Glu Glu Thr Tyr , Asn Leu Gly Arg Gln Val Leu Pro Leu Ser Ala Val Thr Tyr Phe Gln Lys Ser Gly Pro Gly Leu Leu Pro Ala Pro Ala Thr Gln Ser Ala Ser

433

35 40 45 Val Ala Gly Thr Leu Gln Asn Ser Leu Cys Ser Gln Val Thr Lys Lys 55 Lys Arg Ala Asn Met Leu Val Leu Leu Ala Gly Ile Phe Val Val His Ile Ala Thr Val Ile Met Leu Phe Val Ser Thr Ile Ala Asn Val Trp 90 Leu Val Ser Asn Thr Val Asp Ala Ser Val Gly Leu Trp Lys Asn Cys 100 Thr Asn Ile Ser Cys Ser Asp Ser Leu Ser Tyr Ala Ser Glu Asp Ala 120 Leu Lys Thr Val Gln Ala Phe Met Ile Leu Ser Ile Ile Phe Cys Val 135 Ile Ala Leu Leu Val Phe Val Phe Gln Leu Phe Thr Met Glu Lys Gly 145 150 155 Asn Arg Phe Phe Leu Ser Gly Xaa Thr Thr Leu Val Cys Xaa Leu Cys 170 165 Ile Leu Val Gly Cys Pro Ser Thr Leu Val Ile Met Arg Ile Val Met 180 185 Glu Arg Ile Cys Thr Thr Ala Ile Pro Thr Ser Trp Ala Gly Ser Ala 200 Ser Ala Ser Ala Ser Ser Ser Ala Phe Ser Ile Trp Ser 215 <210> 484 <211> 382 <212> PRT <213> Homo sapiens

<212> FRI
<213> Homo sapiens

<220>
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<220>
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Thr Lys Leu Trp Thr Leu Val Ser Asn Pro Asp Thr Asp Ala Leu Ile
                                     10
Cys Trp Ser Pro Ser Xaa Asn Ser Phe His Val Phe Asp Gln Gly Gln
             20
                                 25
Phe Ala Lys Glu Val Leu Pro Lys Tyr Phe Lys His Asn Asn Met Ala
         35
                             40
Ser Phe Val Arg Gln Xaa Asn Met Tyr Gly Phe Arg Lys Val Val His
                         55
Ile Glu Gln Gly Xaa Leu Val Lys Pro Glu Arg Asp Asp Thr Glu Phe
 65
                                         75
                     70
Gln His Pro Cys Phe Leu Arg Gly Gln Glu Gln Leu Leu Glu Asn Ile
                 85
                                     90
Lys Arg Lys Val Thr Ser Val Ser Thr Leu Lys Ser Glu Asp Ile Lys
            100
                                105
Ile Arg Gln Asp Ser Val Thr Lys Leu Leu Thr Asp Val Gln Leu Met
                            120
                                                125
        115
```

| Lys | Gly 130 | Lys | Gln | Glu | Cys | Met 135 | Asp | Ser | Lys | Leu | Leu 140 | Ala | Met | Lys | His |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Glu 145 | Asn | Glu | Ala | Leu | Trp 150 | Arg | Glu | Val | Ala | Ser 155 | Leu | Arg | Gln | Lys | His 160 |
| Ala | Gln | Gln | Gln | Lys 165 | Val | Val | Asn | Lys | Leu 170 | Ile | Gln | Phe | Leu | Ile 175 | Ser |
| Leu | Val | Gln | Ser 180 | Asn | Arg | Ile | Leu | Gly 185 | Val | Lys | Arg | Lys | Ile 190 | Pro | Leu |
| Met | Leu | Asn 195 | Asp | Ser | Gly | Ser | Ala 200 | His | Ser | Met | Pro | Lys 205 | Tyr | Ser | Arg |
| Gln | Phe 210 | Ser | Leu | Glu | His | Val 215 | His | Gly | Ser | Gly | Pro 220 | туг | Ser | Ala | Pro |
| Ser 225 | Pro | Ala | туг | Ser | Ser 230 | Ser | Ser | Leu | Tyr | Ala 235 | Pro | Asp | Ala | Val | Ala 240 |
| Ser | Ser | Gly | Pro | Ile 245 | Ile | Ser | Asp | Ile | Thr 250 | Glu | Leu | Ala | Pro | Ala 255 | Ser |
| Pro | Met | Ala | Ser 260 | Pro | Gly | Gly | Ser | 11e 265 | Asp | Glu | Arg | Pro | Leu 270 | Ser | Ser |
| Ser | Pro | Leu 275 | Val | Arg | Val | Lys | Glu 280 | Glu | Pro | Pro | Ser | Pro 285 | Pro | Xaa | Ser |
| Pro | Arg 290 | Val | Glu | Glu | Ala | Ser 295 | Pro | Gly | Xaa | Pro | Ser 300 | Ser | Val | Asp | Thr |
| Leu 305 | Leu | Ser | Pro | Thr | Ala 310 | Leu | Ile | Asp | Ser | Ile 315 | Leu | Arg | Glu | Ser | Glu 320 |
| Pro | Ala | Pro | Xaa | Ser 325 | Val | Thr | Ala | Leu | Thr 330 | Asp | Ala | Arg | Gly | His 335 | Thr |
| Asp | Thr | Glu | Gly 340 | Arg | Pro | Pro | Ser | Pro 345 | Pro | Pro | Thr | Ser | Thr 350 | Pro | Glu |
| Lys | Cys | Leu 355 | Ser | Val | Xaa | Ala | Trp 360 | Thr | Arg | Met | Ser | Ser 365 | Val | Thr | Thr |
| Trp | Met 370 | Leu | Trp | Thr | Pro | Thr 375 | Trp | Ile | Thr | Cys | Arg 380 | Pro | Cys | | |

| <217 | L> 4: 2> PI 3> Ho | RT | sapi | ens | | | | | | | | | | | |
|------------|-------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-----|
| <222 | l> s: 2> (: | 399) | quals | s any | y of | the | nati | ural: | ly o | ccur | ring | L-ar | nino | acio | ds |
| <400 |)> 48 | 35 | | | | | | | | | | | | | |
| Pro 1 | Ser | Val | Ala | Asn 5 | Val | Gly | Ser | His | Cys 10 | Asp | Leu | Ser | Leu | Lys 15 | Ile |
| Pro | Glu | Ile | Ser 20 | Ile | Gln | Asp | Met | Thr 25 | Ala | Gln | Val | Thr | Ser 30 | Pro | Ser |
| Gly | Lys | Thr 35 | His | Glu | Ala | Glu | Ile 40 | Val | Glu | Gly | Glu | Asn 45 | His | Thr | Туr |
| Cys | Ile 50 | Arg | Phe | Val | Pro | Ala 55 | Glu | Met | Gly | Thr | His 60 | Thr | Val | Ser | Val |
| Lys 65 | Tyr | Lys | Gly | Gln | His 70 | Val | Pro | Gly | Ser | Pro 75 | Phe | Gln | Phe | Thr | Val |
| Gly | Pro | Leu | Gly | Glu 85 | Gly | Gly | Ala | His | Lys 90 | Val | Arg | Ala | Gly | Gly 95 | Pro |
| Gly | Leu | Glu | Arg 100 | Ala | Glu | Ala | Gly | Val 105 | Pro | Ala | Glu | Phe | Ser 110 | Ile | Trp |
| Thr | Arg | Glu 115 | Ala | Gly | Ala | Gly | Gly 120 | Leu | Ala | Ile | Ala | Val 125 | Glu | Gly | Pro |
| Ser | Lys 130 | Ala | Glu | Ile | Ser | Phe 135 | Glu | Asp | Arg | Lys | Asp 140 | Gly | Ser | Cys | Gly |
| Val 145 | Ala | Tyr | Val | Val | Gln 150 | Glu | Pro | Gly | Asp | туг 155 | Glu | Val | Ser | Val | Lys |
| Phe | Asn | Glu | Glu | His 165 | Ile | Pro | Asp | Ser | Pro 170 | Phe | Val | Val | Pro | Val 175 | Ala |
| Ser | Pro | Ser | Gly 180 | Asp | Ala | Arg | Arg | Leu 185 | Thr | Val | Ser | Ser | Leu 190 | Gln | Glu |
| Ser | Gly | Leu 195 | Lys | Val | Asn | Gln | Pro 200 | Ala | Ser | Phe | Ala | Val 205 | Ser | Leu | Asn |
| Gly | Ala 210 | Lys | Gly | Ala | Ile | Asp 215 | Ala | Lys | Val | His | Ser 220 | Pro | Ser | Gly | Ala |

| Leu 225 | Glu | Glu | Cys | Tyr | Val 230 | Thr | Glu | Ile | Asp | Gln 235 | Asp | Lys | Tyr | Ala | Val 240 |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Arg | Phe | Ile | Pro | Arg 245 | Glu | Asn | Gly | Val | Tyr 250 | Leu | Ile | Asp | Val | Lys 255 | Phe |
| Asn | Gly | Thr | His 260 | Ile | Pro | Gly | Ser | Pro 265 | Phe | Lys | Ile | Arg | Val 270 | Gly | Glu |
| Pro | Gly | His 275 | Gly | Gly | Asp | Pro | Gly 280 | Leu | Val | Ser | Ala | Туг 285 | Gly | Ala | Gly |
| Leu | Glu 290 | Gly | Gly | Val | Thr | Gly 295 | Asn | Pro | Ala | Glu | Phe 300 | Val | Val | Asn | Thr |
| Ser 305 | Asn | Ala | Gly | Ala | Gly 310 | Ala | Leu | Ser | Val | Thr 315 | Ile | Asp | Gly | Pro | Ser 320 |
| Lys | Val | Lys | Met | Asp 325 | Cys | Gln | Glu | Суѕ | Pro 330 | Glu | Gly | Tyr | Arg | Val 335 | Thr |
| Tyr | Thr | Pro | Met 340 | Ala | Pro | Gly | Ser | туг 345 | Leu | Ile | Ser | Ile | Lys 350 | Туr | Gly |
| Gly | Pro | Tyr 355 | His | Ile | Gly | Gly | Ser 360 | Pro | Phe | Lys | Ala | Lys 365 | Val | Thr | Gly |
| Pro | Arg 370 | Leu | Val | Ser | Asn | His 375 | Ser | Leu | His | Glu | Thr 380 | Ser | Ser | Val | Phe |
| Val 385 | Asp | Ser | Leu | Thr | Ļys 390 | Ala | Thr | Cys | Ala | Pro 395 | Gln | His | Gly | Xaa | Pro 400 |
| Gly | Pro | Gly | Pro | Ala 405 | Asp | Ala | Ser | Lys | Val 410 | Val | Ala | Lys | Gly | Trp 415 | Gly |

<210> 486

<211> 46

<212> PRT

<213> Homo sapiens

<400> 486

Phe Val Thr Ser Gly Lys Ile Ser Leu Tyr Val Tyr Ile Leu Thr Ile $1 \hspace{1cm} 5 \hspace{1cm} 10 \hspace{1cm} 15$

Arg Leu Asp Thr Asn Lys Ala Thr Leu Leu Thr Ala Ser Gly Glu Leu 20 25 30

Ile Leu Phe Leu Ile Phe Phe Asn Lys Asp Ile Leu Arg Tyr
35 40 45

<210> 487

<211> 162

<212> PRT

<213> Homo sapiens

<400> 487

Leu Gly Val Ala Leu Gly Ala Val Pro Lys Leu His Leu Gly Val Leu 1 5 10 15

Val Ser Thr Gly Leu Arg Thr Ala Val Gly Ser Pro Arg Leu Pro Pro 20 25 30

Thr Ala Leu Gly Ala Ala Tyr Gly Thr Ala Lys Ser Gly Thr Gly Ile 35 40 45

Ala Ala Met Ser Val Met Arg Pro Glu Gln Ile Met Lys Ser Ile Ile 50 55 60

Pro Val Val Met Ala Gly Ile Ile Ala Ile Tyr Gly Leu Val Val Ala 65 70 75 80

Val Leu Ile Ala Asn Ser Leu Asn Asp Asp Ile Ser Leu Tyr Lys Ser 85 90 95

Phe Leu Gln Leu Gly Ala Gly Leu Ser Val Gly Leu Ser Gly Leu Ala 100 105 110

Ala Gly Phe Ala Ile Gly Ile Val Gly Asp Ala Gly Val Arg Gly Thr 115 \$120\$ 125

Ala Gln Gln Pro Arg Leu Phe Val Gly Met Ile Leu Ile Leu Ile Phe 130 135 140

Thr Lys

<210> 488

<211> 114

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Xaa Leu

<210> 489

<211> 149

<212> PRT

<213> Homo sapiens

<220>

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<400> 489
Ser Thr His Ala Ser Glu Asp Val Leu Ala Ala Pro Ser Gly Cys Arg
Ala Ser Arg Pro Pro Thr Ser Gly Arg Glu Gln Phe Trp Ala Arg Gly
                                 25
Leu Ala Ala Asp Met Thr Lys Gly Leu Val Leu Gly Ile Tyr Ser
                            40
Lys Asp Lys Glu Asp Asp Val Pro Gln Phe Thr Ser Ala Gly Glu Asn
                         55
                                             60
Phe Asp Lys Leu Val Ser Gly Lys Leu Arg Glu Ile Leu Asn Ile Ser
                                         75
Gly Pro Pro Leu Lys Ala Gly Lys Thr Arg Thr Phe Tyr Gly Leu His
                                     90
Glu Asp Phe Pro Ser Val Val Val Gly Leu Gly Arg Lys Ala Ala
           100
                               105
Gly Val Asp Asp Gln Glu Asn Trp Xaa Glu Gly Lys Glu Asn Ile Arg
                            120
Val Ala Met Gln Arg Gly Ala Gly Arg Phe Gln Asp Leu Xaa Ile Ser
Ser Val Glu Gly Gly
145
<210> 490
<211> 527
<212> PRT
<213> Homo sapiens
<220>
<221> SITE
<222> (311)
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<223> Xaa equals any of the naturally occurring L-amino acids

| <4 | 0 | 0> | 4 | 9 | C |
|----|---|----|---|---|---|
|----|---|----|---|---|---|

Arg Arg Arg Ser Arg Gly Leu Ile Pro Gly Arg Ala Pro Gly Arg Arg 1 5 10 15

Arg Pro Arg Ala His Glu Val Ala Arg Ala Pro Pro Pro Ile Ala Met
20 25 30

. Asp Arg Met Lys Lys Ile Lys Arg Gln Leu Ser Met Thr Leu Arg Gly 35 40 45

Gly Arg Gly Ile Asp Lys Thr Asn Gly Ala Pro Glu Gln Ile Gly Leu 50 60

Asp Glu Ser Gly Gly Gly Gly Ser Asp Pro Gly Glu Ala Pro Thr 65 70 . 75 80

Arg Ala Ala Pro Gly Glu Leu Arg Ser Ala Arg Gly Pro Leu Ser Ser 85 90 95

Ala Pro Glu Ile Val His Glu Asp Leu Lys Met Gly Ser Asp Gly Glu 100 105 110

Ser Asp Gln Ala Ser Ala Thr Ser Ser Asp Glu Val Gln Ser Pro Val 115 120 . 125

Arg Val Arg Met Arg Asn His Pro Pro Arg Lys Ile Ser Thr Glu Asp 130 135 140

Ile Asn Lys Arg Leu Ser Leu Pro Ala Asp Ile Arg Leu Pro Glu Gly
145 150 155 160

Tyr Leu Glu Lys Leu Thr Leu Asn Ser Pro Ile Phe Asp Lys Pro Leu 165 170 175

Ser Arg Arg Leu Arg Arg Val Ser Leu Ser Glu Ile Gly Phe Gly Lys 180 185 190

Leu Glu Thr Tyr Ile Lys Leu Asp Lys Leu Gly Glu Gly Thr Tyr Ala 195 200 205

Thr Val Tyr Lys Gly Lys Ser Lys Leu Thr Asp Asn Leu Val Ala Leu 210 215 220

Lys Glu Ile Arg Leu Glu His Glu Glu Gly Ala Pro Cys Thr Ala Ile 225 230 235 240

Arg Glu Val Ser Leu Leu Lys Asp Leu Lys His Ala Asn Ile Val Thr 245 250 255

Leu His Asp Ile Ile His Thr Glu Lys Ser Leu Thr Leu Val Phe Glu

| | | | 200 | | | | | 200 | | | | | 270 | | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Tyr | Leu | Asp 275 | Lys | Asp | Leu | Lys | Gln 280 | Tyr | Leu | Asp | Asp | Cys 285 | Gly | Asn | Ile |
| Ile | Asn 290 | Met | His | Asn | Val | Lys 295 | Leu | Phe | Leu | Phe | Gln 300 | Leu | Leu | Arg | Gly |
| Leu 305 | | Tyr | Cys | His | Arg 310 | Xaa | Lys | Val | Leu | His 315 | Arg | Asp | Leu | Lys | Pro 320 |
| Gln | Asn | Leu | Leu | 11e 325 | Asn | Glu | Arg | Gly | Glu 330 | Leu | Lys | Leu | Ala | Asp 335 | Phe |
| Gly | Leu | Ala | Arg 340 | Ala | Lys | Ser | Ile | Pro 345 | Thr | Lys | Thr | Tyr | ser 350 | Asn | Glu |
| Val | Val | Thr 355 | Leu | Trp | Туr | Arg | Pro 360 | Pro | Asp | Ile | Leu | Leu 365 | Gly | Ser | Thr |
| Asp | Tyr 370 | Ser | Thr | Gln | Ile | Asp 375 | Met | Trp | Gly | Val | Gly 380 | Cys | Ile | Phe | Tyr |
| Glu 385 | Met | Ala | Thr | Gly | Arg 390 | Pro | Leu | Phe | Pro | Gly 395 | Ser | Thr | Val | Glu | Glu 400 |
| Gln | Leu | His | Phe | Ile 405 | Phe | Arg | Ile | Leu | Gly 410 | Thr | Pro | Thr | Gļu | Glu 415 | Thr |
| Trp | Pro | Gly | Ile 420 | Leu | Ser | Asn | Glu | Glu 425 | Phe | Lys | Thr | Tyr | Asn 430 | Tyr | Pro |
| Lys | Tyr | Arg 435 | Ala | Glu | Ala | Leu | Leu 440 | Ser | His | Ala | Pro | Arg 445 | Leu | Asp | Ser |
| Asp | Gly 450 | Ala | Asp | Leu | Leu | Thr 455 | Lys | Leu | Leu | Gln | Phe 460 | Glu | Gly | Arg | Asn |
| Arg 465 | Ile | Ser | Ala | Glu | Asp 470 | Ala | Met | Lys | His | Pro 475 | Phe | Phe | Leu | Ser | Leu 480 |
| Gly | Glu | Arg | Ile | His 485 | Lys | Leu | Pro | Asp | Thr 490 | Thr | Ser | Ile | Phe | Ala 495 | Leu |
| Lys | Glu | Ile | Gln 500 | Leu | Gln | Lys | Glu | Ala 505 | Ser | Leu | Arg | Ser | Ser 510 | Ser | Met |
| Pro | Asp | Ser 515 | | Arg | Pro | | Phe | | Val | Val | | Thr | Glu | Phe | |

<221> SITE <222> (49)

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<400> 491
Cys Thr Arg Ala His Pro Lys Asn Leu Val Glu Lys Gly Ile Leu Thr
Thr Glu Lys Gln Asn Phe Leu Leu Phe Asp Met Thr Thr His Pro Val
             20
Thr Asn Thr Thr Glu Lys Gln Arg Leu Val Lys Lys Leu Gln Asp Ser
                             40
Val Leu Glu Arg Trp Val Asn Asp Pro Gln Arg Met Asp Lys Arg Thr
                         55
Leu Ala Leu Leu Val Leu Ala His Ser Ser Asp Val Leu Glu Asn Val
                     70
Phe Ser Ser Leu Thr Asp Asp Lys Tyr Asp Val Ala Met Asn Arg Ala
                                     90
Lys Asp Leu Val Glu Leu Asp Pro Glu Val Glu Gly Thr Lys Pro Ser
            100
                                105
Ala Thr Glu Met Ile Trp Ala Val Leu Ala Ala Phe Xaa
        115
                            120
                                                125
<210> 492
<211> 53
<212> PRT
<213> Homo sapiens
<220>
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<223> Xaa equals any of the naturally occurring L-amino acids
<220>
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<220>
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<222> (51)
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<400> 492
Val Ser Xaa Ser Ile Leu Ala Leu Leu Phe Asn Thr Asp Ala Leu Phe
                 5
Ser Arg Val Tyr Glu Ser Leu Ser Asp Asn His Gly Leu Gln Glu Gln
             20
Thr Val Glu Lys Leu Phe Phe Gln Trp Lys Ser Trp Val Gln Glu Met
                             40
Xaa Gly Xaa Leu Lys
     50
<210> 493
<211> 82
<212> PRT
<213> Homo sapiens
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<220>
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<222> (67)
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<221> SITE
<222> (78)
<223> Xaa equals any of the naturally occurring L-amino acids
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<221> SITE
<222> (79)
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<400> 493

Pro Gly Phe Phe Phe Gln Met Leu Val His Thr Tyr Ser Ser Met Asp 1 5 10 15

Arg His Asp Gly Val Pro Ser His Ser Ser Arg Leu Ser Gln Leu Gly
20 25 30

Ser Val Ser Gln Gly Pro Tyr Ser Ser Ala Pro Pro Leu Ser His Thr 35 40 45

Pro Ser Ser Asp Phe Gln Pro Pro Tyr Phe Pro Xaa Pro Tyr Gln Pro 50 55 60

Leu Pro Xaa Xaa Gln Ser Gln Asp Pro Tyr Ser His Val Xaa Xaa Pro 65 70 75 80

Tyr Pro

<210> 494

<211> 290

<212> PRT

<213> Homo sapiens

<400> 494

Tyr Lys Asp Trp Leu Thr Lys Met Ser Gly Lys His Asp Val Gly Ala 1 5 10 15

Tyr Met Leu Met Tyr Lys Gly Ala Asn Arg Thr Glu Thr Val Thr Ser 20 25 30

Phe Arg Lys Arg Glu Ser Lys Val Pro Ala Asp Leu Leu Lys Arg Ala 35 40 45

Phe Val Arg Met Ser Thr Ser Pro Glu Ala Phe Leu Ala Leu Arg Ser 50 55 60

His Phe Ala Ser Ser His Ala Leu Ile Cys Ile Ser His Trp Ile Leu 65 70 75 80

Gly Ile Gly Asp Arg His Leu Asn Asn Phe Met Val Ala Met Glu Thr 85 90 95

Gly Gly Val Ile Gly Ile Asp Phe Gly His Ala Phe Gly Ser Ala Thr $100 \hspace{1cm} 105 \hspace{1cm} 110$

Gln Phe Leu Pro Val Pro Glu Leu Met Pro Phe Arg Leu Thr Arg Gln 115 120 125

Phe Ile Asn Leu Met Leu Pro Met Lys Glu Thr Gly Leu Met Tyr Ser

Ile Met Val His Ala Leu Arg Ala Phe Arg Ser Asp Pro Gly Leu Leu 145 155 Thr Asn Thr Met Asp Val Phe Val Lys Glu Pro Ser Phe Asp Trp Lys 170 Asn Phe Glu Gln Lys Met Leu Lys Lys Gly Gly Ser Trp Ile Gln Glu Ile Asn Val Ala Glu Lys Asn Trp Tyr Pro Arg Gln Lys Ile Cys Tyr 200 Ala Lys Arg Lys Leu Ala Gly Ala Asn Pro Ala Val Ile Thr Cys Asp Glu Leu Leu Gly His Glu Lys Ala Pro Ala Phe Arg Asp Tyr Val Ala Val Ala Arg Gly Ser Lys Asp His Asn Ile Arg Ala Gln Glu Pro 245 250 Glu Ser Gly Leu Ser Glu Glu Thr Gln Val Lys Cys Leu Met Asp Gln 265 Ala Thr Asp Pro Asn Ile Leu Gly Arg Thr Trp Glu Gly Trp Glu Pro 275 280 Trp Met 290 <210> 495 <211> 156 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (148) <223> Xaa equals any of the naturally occurring L-amino acids <400> 495 Cys Gln Ser His Pro Leu Pro Gly Gly Pro Ala Cys Pro Cys Leu Ala Cys His Ile Thr Leu Leu Phe Gly Arg Pro Trp Leu Ile Lys Glu Val

447

20 25 30 Leu Val Val Ser Gln Ala Lys Trp Asn Leu Glu Thr Val Lys Lys Val 40 Gln Ile Thr Leu Asn Cys Ile Gln Glu Val His Phe Phe Pro Ile Val 55 Arg Gly Ser Trp Ser Leu Arg Asp Ala Arg Leu Glu Ser Asp Tyr Ile 70 75 Ile Ile Gln Asn Gly Asn Ser Gln Gly Asn Ala Phe Phe His Phe Ile 85 90 Arg Phe Phe Tyr Pro His Cys Thr Pro Ser Pro Ser Pro Leu Pro Ile 105 Trp Met Ala Ser Gln Lys Leu Gly Pro Ser Pro Pro Cys Leu Gly Gly 120 Gly Gln Ser Pro Leu Thr Ala Glu Ala Ala Leu Leu Ser Ser Ala Val 135 Leu Pro Leu Xaa Lys Cys Leu Gln Arg Val Met Ser 150 <210> 496 <211> 251 <212> PRT · <213> Homo sapiens <220> <221> SITE <222> (42) <223> Xaa equals any of the naturally occurring L-amino acids <400> 496 Glu Glu Leu Leu Arg Ala Gln Glu Ala Pro Gly Gln Ala Glu Pro Pro 10 Ala Ala Glu Val Gln Gly Ala Gly Asn Glu Asn Glu Pro Arg Glu Ala Asp Lys Ser His Pro Glu Gln Arg Xaa Leu Arg Pro Arg Leu Cys

40

Thr Met Lys Lys Gly Pro Ser Gly Tyr Gly Phe Asn Leu His Ser Asp

448

Lys Ser Lys Pro Gly Gln Phe Ile Arg Ser Val Asp Pro Asp Ser Pro 80

Ala Glu Ala Ser Gly Leu Arg Ala Gln Asp Arg Ile Val Glu Val Asn 90

Gly Val Cys Met Glu Gly Lys Gln His Gly Asp Val Val Ser Ala Ile 110

Arg Ala Gly Gly Asp Glu Thr Lys Leu Leu Val Val Asp Arg Glu Thr 115

Asp Glu Phe Phe Lys Lys Cys Arg Val Ile Pro Ser Gln Glu His Leu 130

Asn Gly Pro Leu Pro Val Pro Phe Thr Asn Gly Glu Ile Gln Lys Glu 145

Asn Ser Arg Glu Ala Leu Ala Glu Ala Ala Leu Glu Ser Pro Arg Pro

Ala Leu Val Arg Ser Ala Ser Ser Asp Thr Ser Glu Glu Leu Asn Ser

185

170

Gln Asp Ser Pro Pro Lys Gln Asp Ser Thr Ala Pro Ser Ser Thr Ser 195 200 205

Ser Ser Asp Pro Ile Leu Asp Phe Asn Ile Ser Leu Ala Met Ala Lys 210 215 220

Glu Arg Ala His Gln Lys Arg Ser Ser Lys Arg Ala Pro Gln Met Asp 225 230 235 240

Trp Ser Lys Lys Asn Glu Leu Phe Ser Asn Leu 245 . 250

165

<210> 497

<211> 48

<212> PRT

<213> Homo sapiens

<400> 497

Asn Gly Ala Glu Ala Val Ser Thr Glu Ala Lys Met Thr Ala Phe Pro 1 5 10 15

Asp Trp Pro Trp Leu Phe His Thr Leu Cys Asp Pro Cys Pro Met Thr 20 25 30

Leu Trp Leu Thr Leu Pro Glu Ala Met Thr Thr Ala Ala Phe Cys His

WO 00/55173

35 40 45

449

PCT/US00/05881

<210> 498 <211> 373 <212> PRT <213> Homo sapiens . <220> <221> SITE <222> (337) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (372) <223> Xaa equals any of the naturally occurring L-amino acids <400> 498 Gly Thr Arg Gly Ser Arg Ala Ser Gly Val Cys Ala Arg Gly Cys Leu Asp Ser Ala Gly Pro Trp Thr Met Ser Arg Ala Leu Arg Pro Pro Leu 20 Pro Pro Leu Cys Phe Phe Leu Leu Leu Ala Ala Ala Gly Ala Arg Ala Gly Gly Tyr Glu Thr Cys Pro Thr Val Gln Pro Asn Met Leu Asn Val His Leu Leu Pro His Thr His Asp Asp Val Gly Trp Leu Lys Thr Val Asp Gln Tyr Phe Tyr Gly Ile Lys Asn Asp Ile Gln His Ala Gly Val Gln Tyr Ile Leu Asp Ser Val Ile Ser Ala Leu Leu Ala Asp Pro 100 105 Thr Arg Arg Phe Ile Tyr Val Glu Ile Ala Phe Phe Ser Arg Trp Trp

His Gln Gln Thr Asn Ala Thr Gln Glu Val Val Arg Asp Leu Val Arg

Gln Gly Arg Leu Glu Phe Ala Asn Gly Gly Trp Val Met Asn Asp Glu

| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
|------------|------------|------------|------------|------------|------------|-------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Ala | Ala | Thr | His | Туг 165 | Gly | Ala | Ile | Val | Asp 170 | Gln | Met | Thr | Leu | Gly 175 | Leu |
| Arg | Phe | Leu | Glu 180 | Asp | Thr | Phe | Gly | Asn 185 | Asp | Gly | Arg | Pro | Arg 190 | Val | Ala |
| Trp | His | Ile 195 | Asp | Pro | Phe | Gly | His 200 | Ser | Arg | Glu | Gln | Ala 205 | Ser | Leu | Phe |
| Ala | Gln 210 | Met | Gly | Phe | Asp | Gly 215 _. | Phe | Phe | Phe | Gly | Arg 220 | Leu | Asp | Туr | Gln |
| Asp 225 | Lys | Trp | Val | Arg | Met 230 | Gln | Lys | Leu | Glu | Met 235 | Glu | Gln | Val | Trp | Arg 240 |
| Ala | Ser | Thr | Ser | Leu 245 | Lys | Pro | Pro | Thr | Ala 250 | Asp | Leu | Phe | Thr | Gly 255 | Val |
| Leu | Pro | Asn | Gly 260 | Tyr | Asn | Pro | Pro | Arg 265 | Asn | Leu | Cys | Trp | Asp 270 | Val | Leu |
| Суѕ | Val | Asp 275 | Gln | Pro | Leu | Val | Glu 280 | Asp | Pro | Arg | Ser | Pro 285 | Glu | Tyr | Asn |
| Ala | Lys 290 | Glu | Leu | Val | Asp | Tyr 295 | Phe | Leu | Asn | Val | Ala 300 | Thr | Ala | Gln | Gly |
| Arg 305 | Tyr | Tyr | Arg | Thr | Asn 310 | His | Thr | Val | Met | Thr 315 | Met | Gly | Ser | Asp | Phe 320 |
| Gln | Tyr | Glu | Asn | Ala 325 | Asn | Met | Trp | Phe | Lys 330 | Asn | Leu | Asp | Lys | Leu 335 | Ile |
| Xaa | Leu | Val | Asn 340 | Ala | Gln | Gly | Lys | Arg 345 | Lys | Gln | Cys | Pro | Cys 350 | Ser | Leu |
| Leu | His | Pro 355 | Arg | Leu | Leu | Pro | Leu 360 | Gly | Ala | Glu | Gln | Gly 365 | Gln | Pro | His |
| Leu | Val 370 | Ser | Xaa | Thr | | | | | | | | | | | |

<210> 499

<211> 238

<212> PRT

<213> Homo sapiens

451

<400> 499

Ala Leu Pro Gly Pro Asp Trp His Gly Ala Gly Ala Ala Asp Arg Gly
1 10 15

Pro Ala Ala Pro Pro Arg Pro Gly Pro Cys Ala Tyr Ala Ala His Gly
20 25 30

Arg Gly Ala Leu Ala Glu Ala Ala Arg Arg Cys Leu His Asp Ile Ala 35 40 45

Leu Ala His Arg Ala Ala Thr Ala Ala Arg Pro Pro Ala Pro Pro Pro 50 55 60

Ala Pro Gln Pro Pro Ser Pro Thr Pro Ser Pro Pro Arg Pro Thr Leu 65 70 75 80

Ala Arg Glu Asp Asn Glu Glu Asp Glu Asp Glu Pro Thr Glu Thr Glu 85 90 95

Thr Ser Gly Glu Gln Leu Gly Ile Ser Asp Asn Gly Gly Leu Phe Val 100 105 110

Met Asp Glu Asp Ala Thr Leu Gln Asp Leu Pro Pro Phe Cys Glu Ser 115 120 125

Asp Pro Glu Ser Thr Asp Asp Gly Ser Leu Ser Glu Glu Thr Pro Ala 130 135 140

Gly Pro Pro Thr Cys Ser Val Pro Pro Ala Ser Ala Leu Pro Thr Gln 145 150 155 160

Gln Tyr Ala Lys Ser Leu Pro Val Ser Val Pro Val Trp Gly Phe Lys
165 170 175

Glu Lys Arg Thr Glu Ala Arg Ser Ser Asp Glu Glu Asn Gly Pro Pro 180 185 190

Ser Ser Pro Asp Leu Asp Arg Ile Ala Ala Ser Met Arg Ala Leu Val 195 200 205

Leu Arg Glu Ala Glu Asp Thr Gln Val Phe Gly Asp Leu Pro Arg Pro 210 215 220

Arg Leu Asn Thr Ser Asp Phe Gln Lys Leu Lys Arg Lys Tyr 225 230 235

<210> 500

<211> 198

<212> PRT

<213> Homo sapiens <220> <221> SITE <222> (94) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (156) <223> Xaa equals any of the naturally occurring L-amino acids <400> 500 Asn Ser Ala Glu Leu Ser Pro Gly Leu Cys Ser Pro Thr Pro Thr Glu 5 10 Ala Arg Ala Gly Asp Ala Gly Pro Ala Ala Arg Ser Arg Lys Gln Asn Pro Gln Ser Pro Pro Cys Cys Cys Val Asp Asp Thr Trp Ala Gln Ala 40 Glu Val Gly Pro Val Thr Ser Cys Thr Gly Phe Val Glu Gly Ser Ser Arg Thr Gly Gly Met Gly Ser Ala Cys Ile Lys Val Thr Lys Tyr Phe Leu Phe Leu Phe Asn Leu Ile Phe Phe Ile Leu Gly Ala Xaa Ile Leu 85 Gly Phe Gly Val Trp Ile Leu Ala Asp Lys Ser Ser Phe Ile Ser Val Leu Gln Thr Ser Ser Ser Leu Arg Met Gly Ala Tyr Val Phe Ile 120 Gly Val Gly Ala Val Thr Met Leu Met Gly Phe Leu Gly Cys Ile Gly 130 Ala Val Asn Glu Val Arg Cys Leu Leu Gly Leu Xaa Phe Ala Phe Leu 145 150 155 Leu Leu Ile Leu Ile Ala Gln Val Thr Ala Gly Ala Leu Phe Tyr Phe 170 .

Asn Met Gly Lys Val Ser Pro Ser Leu Pro Pro Ser Ser Leu Gly Trp

185

190

Thr Asn His Gly Gly Asp 195

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<210> 502 <211> 507

Asp Pro Ala Gly Xaa Tyr Cys Gly Val 165

| <212 | 2> PI | RТ | | | | | | | | | | | | | | |
|-------|-------------|-------|---------|--------|------|--------------|------|-------|-------|-------|--------|------|-------------|-------|-----|--|
| <213 | 3> H | omo s | sapi | ens | | | | | | | | | | | | |
| | | | • | | | | | | | | | | | | | |
| <220 |)> | | | | | | | | | | | | | | | |
| | l> s: | ITE | | | | | | | | | | | | | | |
| | 2> (| | | | | | | | | | | | | | | |
| | | - | rua l | s ans | , of | the | nati | ırall | וע מו | curi | rina | L-an | nino | acio | is | |
| ``` | ,, A | ia ci | 4001. | . a.i. | , 01 | Circ | na c | 11011 | Ly O | JCuli | . 1119 | D u. | | 4020 | | |
| <220 | ١. | | | | | | | | | | | | | | | |
| |)- L> S: | TTE | | | | | | | | | | | | | | |
| | 2> (: | | | | | | | | | | | | | | | |
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| -226 | ١. | | | | | | | | | | | | | | | |
| <220 | | | | | | | | | | | | | | | | |
| | l> s: | | | | | | | | | | | | | | | |
| | 2> (4 | | | | _ | | | | | | | | • | | | |
| <223 | 3> X | aa e | quals | s any | ot | the | nati | ıralı | Ly o | ccuri | ring | r-su | urno | acıc | IS | |
| | | | | | | | | | | | | | | | | |
| |)> 5(| | | | | | | | | | _ | | | | | |
| | Arg | GIn | Leu | | Arg | Pro | Ala | Glu | | Asp | Ser | vaı | Met | | GIU | |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | | |
| | | | | | | | | • | | | _ | | | | | |
| Gln | Val | Ala | | Ser | Arg | Thr | Gln | | Cys | Gly | Ile | Leu | _ | Glu | Glu | |
| | | | 20 | | | | | 25 | | | | | 30 | | | |
| | | | | | | | • | | | | | | | | | |
| Leu | Phe | Gln | Gly | Asp | Ala | Phe | His | Gln | Ser | Asp | Thr | | Ile | Phe | Ile | |
| | | 35 | | | | | 40 | | | | | 45 | | | | |
| | | | | | | | | | | | | | | | | |
| Ile | Met | Gly | Ala | Ser | Gly | Asp | Leu | Ala | Lys | Lys | Lys | Ile | Tyr | Pro | Thr | |
| | 50 | | | | | 55 | | | | | 60 | | | | | |
| | | | | | | | | | | | | | | | | |
| Ile | Trp | Trp | Leu | Phe | Arg | Asp | Gly | Leu | Leu | Pro | Glu | Asn | Thr | Phe | Ile | |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 | |
| | | | | | | | | | | | | | | | | |
| Val | Gly | Tyr | Ala | Arg | Ser | Arg | Leu | Thr | Val | Ala | Asp | Ile | Arg | Lys | Gln | |
| | | | | 85 | | | | | 90 | | | | | 95 | | |
| | | | | | | | | | | | | | | | | |
| Ser | Glu | Pro | Phe | Phe | Lys | Ala | Thr | Pro | Glu | Glu | Lys | Leu | Lys | Leu | Glu | |
| | | | 100 | | | | | 105 | | | | | 110 | | | |
| | | | | | | | | | | | | | | | | |
| Asp | Phe | Phe | Ala | Arg | Asn | Ser | Tyr | Val | Ala | Gly | Gln | Tyr | Asp | Asp | Ala | |
| • | | 115 | | - | | | 120 | | | - | | 125 | _ | | | |
| | | | | | | | | | | | | | | | | |
| Ala | Ser | Tvr | Gln | Ara | Leu | Asn | Ser | His | Met | Asn | Ala | Leu | His | Leu | Glv | |
| | 130 | -1- | | | | 135 | | | | | 140 | | | | 1 | |
| | | | | | | | | | | | - 10 | | | | | |
| Ser | Gla | Δla | Acn | Ara | Lev | Dhe | Tur | Leu | Δ1 » | Leu | Pro | Pro | Thr | Val | Tvr | |
| 145 | 3111 | VIG | nali | niy | 150 | FIIC | TYL | Leu | ura | 155 | | 0 | T 111 | 4 G T | 160 | |
| - 4 7 | | | | | 130 | | | | | | | | | | 100 | |
| G3 | Δl= | Val | ጥኮ፦ | Lve | Acn | Tle | Hic | Gl. | Ser | Cys | Me+ | Ser | Gln | Tla | Glv | |
| JIU | AIG | 441 | TIIL | 165 | no!! | 116 | **** | GIU | 170 | Cys | | | -111 | 175 | 1 | |
| | | | | 103 | | | | | 1/0 | | | | | 113 | | |

| ттр | Asn | Arg | 180 | IIe | Val | Glu | Lys | Pro 185 | Phe | Gly | Arg | Asp | 190 | GIN | ser |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Ser | Asp | Arg 195 | Leu | Ser | Asn | His | 11e 200 | Ser | Ser | Leu | Phe | Arg 205 | Glu | Asp | Gln |
| Ile | Туг 210 | Arg | Ile | Asp | His | Tyr 215 | Leu | Gly | Lys | Glu | Met 220 | Val | Gln | Asn | Leu |
| Met 225 | Val | Leu | Arg | Phe | Ala 230 | Asn | Arg | Ile | Phe | Gly 235 | Pro | Ile | Trp | Asn | Arg 240 |
| Asp | Asn | Ile | Ala | Cys 245 | Val | Ile | Leu | Thr | Phe 250 | Lys | Glu | Pro | Phe | Gly 255 | Thr |
| Glu | Gly | Arg | Gly 260 | Gly | Туr | Phe | Asp | Glu 265 | Phe | Gly | Ile | Ile | Arg 270 | Asp | Val |
| Met | Gln | Asn 275 | His | Leu | Leu | Gln | Met 280 | Leu | Cys | Leu | Val | Ala 285 | Met | Glu | Lys |
| Pro | Ala 290 | Ser | Thr | Asn | Ser | Asp 295 | Asp | Val | Arg | Asp | Glu 300 | Lys | Val | Lys | Val |
| Leu 305 | Lys | Cys | Ile | Ser | Glu 310 | Val | Gln | Ala | Asn | Asn 315 | Val | Val | Leu | Gly | G1n 320 |
| Tyr | Val | Gly | Asn | Pro 325 | Asp | Gly | Glu | Gly | Glu 330 | Ala | Thr | Lys | Gly | Tyr 335 | Leu |
| Asp | Asp | Pro | Thr 340 | Val | Pro | Arg | Gly | Ser 345 | Thr | Thr | Ala | Thr | Phe 350 | Ala | Ala |
| Val | Val | Leu 355 | туr | Val | Glu | Asn | Glu 360 | Xaa | Trp | Asp | Gly | Val 365 | Pro | Phe | Ile |
| Leu | Arg 370 | Cys | Gly | Lys | Ala | Leu 375 | Asn | Glu | Arg | Lys | Ala 380 | Glu | Val | Arg | Leu |
| G1n 385 | Phe | His | Asp | Val | Ala 390 | Gly | Asp | Ile | Phe | His 395 | Gln | Gln | Cys | Lys | Arg 400 |
| Asn | Glu | Leu J | Val | Ile 405 | Arg | Val | Gln | Pro | Asn 410 | Glu | Ala | Val | Tyr | Thr 415 | Lys |
| | | | 420 | • | | - | | 425 | | | Pro | | 430 | | |
| Leu | Asp | Leu 435 | Thr | Tyr | Gly | Asn | Arg 440 | Tyr | Lys | Asn | Val | Lys 445 | Leu | Pro | Asp |

456

Ala Tyr Glu Arg Leu Ile Leu Asp Val Phe Cys Gly Xaa Gln Met His 450 455 460

Phe Val Arg Arg Thr Ser Ser Val Arg Pro Gly Val Phe Ser Pro His 465 470 475 480

Cys Cys Thr Arg Leu Ser Trp Arg Ser Pro Ser Pro Ser Pro Ile Phe 485 490 495

Met Ala Ala Glu Ala Pro Arg Arg Gln Thr Ser

<210> 503

<211> 260

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (69)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 503

Gly Pro Glu Val Leu Pro Glu Pro Arg Val Pro Arg Glu Ala Leu Ala 1 5 10 15

Phe Ile Ile Arg Ser Phe Gly Gly Glu Val Ser Trp Asp Lys Ser Leu 20 25 30

Cys Ile Gly Ala Thr Tyr Asp Val Thr Asp Ser Arg Ile Thr His Gln 35 40 45

Ile Val Asp Arg Pro Gly Gln Gln Thr Ser Val Ile Gly Arg Cys Tyr
50 55 60

Val Gln Pro Gln Xaa Val Phe Asp Ser Val Asn Ala Arg Leu Leu 65 70 75 80

Pro Val Ala Glu Tyr Phe Ser Gly Val Gln Leu Pro Pro His Leu Ser 85 90 95

Pro Phe Val Thr Glu Lys Glu Gly Asp Tyr Val Pro Pro Glu Lys Leu 100 105 110

Lys Leu Leu Ala Leu Gln Arg Gly Glu Asp Pro Gly Asn Leu Asn Glu 115 120 125

Ser Glu Glu Glu Glu Glu Asp Asp Asn Asn Glu Gly Asp Gly Asp

130 135 140 Glu Glu Glu Glu Glu Glu Glu Glu Asp Ala Glu Ala Gly Ser 150 155 Glu Lys Glu Glu Glu Ala Arg Leu Ala Ala Leu Glu Glu Gln Arg Met 170 Glu Gly Lys Lys Pro Arg Val Met Ala Gly .Thr Leu Lys Leu Glu Asp 185 Lys Gln Arg Leu Ala Gln Glu Glu Glu Ser Glu Ala Lys Arg Leu Ala 195 200 Ile Met Met Lys Lys Arg Glu Lys Tyr Leu Tyr Gln Lys Ile Met 215 Phe Gly Lys Arg Arg Lys Ile Arg Glu Ala Asn Lys Leu Ala Glu Lys 230 235 Arg Lys Ala His Asp Glu Ala Val Arg Ser Glu Lys Lys Ala Lys Lys Ala Arg Pro Glu 260 <210> 504 <211> 424 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (292) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (342) <223> Xaa equals any of the naturally occurring L-amino acids Leu Leu Gln Arg Cys Tyr Ala Phe Pro Gly His Arg Leu Ala His Ser Gly Ser Asp Leu Ser Leu Leu Val Pro Glu Ile Glu Asp Met Tyr Ser 20 25 Ser Pro Tyr Leu Arg Pro Ser Glu Ser Pro Ile Thr Val Glu Val Asn

458

35 40 45

Cys Thr Asn Pro Gly Thr Arg Tyr Cys Trp Met Ser Thr Gly Leu Tyr

Ile Pro Gly Arg Gln Ile Ile Glu Val Ser Leu Pro Glu Ala Ala Ala 65 70 75 80

Ser Ala Asp Leu Lys Ile Gln Ile Gly Cys His Thr Asp Asp Leu Thr 85 90 95

Arg Ala Ser Lys Leu Phe Arg Gly Pro Leu Val Ile Asn Arg Cys Cys 100 105 110

Leu Asp Lys Pro Thr Lys Ser Ile Thr Cys Leu Trp Gly Gly Leu Leu 115 120 125

Tyr Ile Ile Val Pro Gln Asn Ser Lys Leu Gly Ser Val Pro Val Thr 130 135 140

Val Lys Gly Ala Val His Ala Pro Tyr Tyr Lys Leu Gly Glu Thr Thr 145 150 155 160

Leu Glu Glu Trp Lys Arg Arg Ile Gln Glu Asn Pro Gly Pro Trp Gly
165 170 175

Glu Leu Ala Thr Asp Asn Ile Ile Leu Thr Val Pro Thr Ala Asn Leu 180 185 190

Arg Thr Leu-Glu Asn Pro Glu Pro Leu Leu Arg Leu Trp Asp Glu Val 195 200 205

Met Gln Ala Val Ala Arg Leu Gly Ala Glu Pro Phe Pro Leu Arg Leu 210 215 220

Pro Gln Arg Ile Val Ala Asp Val Gln Ile Ser Val Gly Trp Met His 225 230 235 240

Ala Gly Tyr Pro Ile Met Cys His Leu Glu Ser Val Gln Glu Leu Ile 245 250 255

As nGlu Lys Leu Ile Arg Thr Lys Gly Leu Trp Gly Pro Val His Glu 260 265 270

Leu Gly Arg Asn Gln Gln Arg Gln Glu Trp Glu Phe Pro Pro His Thr 275 280 285

Thr Glu Ala Xaa Cys Asn Leu Trp Cys Val Tyr Val His Glu Thr Val 290 295 300

Leu Gly Ile Pro Arg Ser Arg Ala Asn Ile Ala Leu Trp Pro Pro Val

305 310 315 320 Arg Glu Lys Arg Val Arg Ile Tyr Leu Ser Lys Gly Pro Asn Val Lys 325 330 Asn Trp Asn Ala Trp Xaa Ala Leu Glu Thr Tyr Leu Gln Leu Gln Glu 345 Ala Phe Gly Trp Glu Pro Phe Ile Arg Leu Phe Thr Glu Tyr Arg Asn 355 360 Gln Thr Asn Leu Pro Thr Glu Asn Val Asp Lys Met Asn Leu Trp Val 370 375 380 Lys Met Phe Ser His Gln Val Gln Lys Asn Leu Ala Pro Phe Phe Glu 390 395 Ala Trp Ala Gly Pro Ser Arg Arg Lys Trp Leu Pro Ala Trp Pro Ile 410 Cys Leu Asn Gly Arg Lys Ile Leu 420 <210> 505 <211> 70 <212> PRT <213> Homo sapiens <220> <221> SITE ' <222> (49) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (54) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (66) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (70) <223> Xaa equals any of the naturally occurring L-amino acids

<400> 505

WO 00/55173

460

PCT/US00/05881

Leu His Gln Ser Leu Leu His Leu Glu Lys Thr Asn Glu Arg Lys Ser 5 10 Ile Phe Leu Ile His Tyr Pro Asn Asn Asn Arg Thr Pro Tyr Arg Asn 25 Tyr Tyr His Tyr Val Ser Lys His Tyr Ile Pro Ile Thr Tyr Pro Thr 35 40 45 Xaa Ser Ile Ile Asp Xaa Ile Ser Ile Pro Thr Met Ile Ser Ala Leu 55 Asn Xaa Gln Asn Lys Xaa <210> 506 <211> 434 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (69) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (135) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (363) <223> Xaa equals any of the naturally occurring L-amino acids <400> 506 Ser Thr His Ala Ser Ala His Ala Ser Val Ser Thr Ala Ala Ala Ala 10 Ala Leu Ala Ala Ala Val Lys Ala Lys His Leu Ala Ala Val Glu 20 25 Glu Arg Lys Ile Lys Ser Leu Val Ala Leu Leu Val Glu Thr Gln Met 40 Lys Lys Leu Glu Ile Lys Leu Arg His Phe Glu Glu Leu Glu Thr Ile

55

Met Asp Arg Glu Xaa Glu Ala Leu Glu Tyr Gln Arg Gln Gln Leu Leu

| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Ala | Asp | Arg | Gln | Ala 85 | Phe | His | Met | Glu | Gln 90 | Leu | Lys | туr | Ala | Glu 95 | Met |
| Arg | Ala | Arg | Gln 100 | Gln | His | Phe | Gln | Gln 105 | Met | His | Gln | Gln | Gln 110 | Gln | Gln |
| Pro | Pro | Pro 115 | Ala | Leu | Pro | Pro | Gly 120 | Ser | Gln | Pro | Ile | Pro 125 | Pro | Thr | Gly |
| Ala | Ala 130 | Gly | Pro | Pro | Ala | Xaa 135 | His | Gly | Leu | Ala | Val 140 | Ala | Pro | Ala | Ser |
| Val 145 | Val | Pro | Ala | Pro | Ala 150 | Gly | Ser | Gly | Ala | Pro 155 | Pro | Gly | Ser | Leu | Gly 160 |
| Pro | Ser | Glu | Gln | 11e 165 | Gly | Gln | Ala | Gly | Ser 170 | Thr | Ala | Gly | Pro | Gln 175 | Gln |
| Gln | Glń | Pro | Ala 180 | Gly | Ala | Pro | Gln | Pro 185 | Gly | Ala | Val | Pro | Pro 190 | Gly | Val |
| Pro | Pro | Pro 195 | Gly | Pro | His | Gly | Pro 200 | Ser | Pro | Phe | Pro | Asn 205 | Gln | Gln | Thr |
| Pro | Pro 210 | Ser | Met | Met | Pro | Gly 215 | Ala | Val | Pro | Gly | Ser 220 | Gly | His | Pro | Gly |
| Val 225 | Ala | Gly | Asn | Ala | Pro 230 | Leu | Gly | Leu | Pro | Phe 235 | Gly | Met | Pro | Pro | Pro 240 |
| Pro | Pro | Pro | Pro | Ala 245 | Pro | Ser | Ile | Ile | Pro 250 | Phe | Gly | Ser | Leu | Ala 255 | Asp |
| Ser | Ile | Ser | Ile 260 | Asn | Leu | Pro | Ala | Pro 265 | Pro | Asn | Leu | His | Gly 270 | His | His |
| His | His | Leu 275 | Pro | Phe | Ala | Pro | Gly 280 | Thr | Leu | Pro | Pro | Pro 285 | Asn | Leu | Pro |
| Val | Ser 290 | Met | Ala | Asn | Pro | Leu 295 | His | Pro | Asn | Leu | Pro 300 | Ala | Thr | Thr | Thr |
| Met 305 | Pro | Ser | Ser | Leu | Pro 310 | Leu | Gly | Pro | Gly | Leu 315 | Gly | Ser | Ala | Ala | Ala 320 |
| Gln | Ser | Pro | Ala | 11e 325 | Val | Ala | Ala | Val | Gln 330 | Gly | Asn | Leu | Leu | Pro 335 | Ser |
| Ala | Ser | Pro | Leu | Pro | Asp | Pro | Gly | Thr | Pro | Leu | Pro | Pro | Asp | Pro | Thr |

462

340 345 350 Ala Pro Ser Pro Arg His Gly His Pro Cys Xaa His Leu His Ser Glu 360 Glu Pro Ala Arg His Leu Ser Pro Ser Pro Pro Val Asp Ile Thr Val Pro Gly Thr Ala Leu Pro Pro Pro Leu Gly Pro Ser Pro Ala Trp Arg 390 Val His His Tyr Val Arg Lys Ala Pro Ser Ala Pro Pro Lys Pro Ser 405 Pro Cys Leu Thr Glu Ala Cys Ile Phe Ile Ser Asp Tyr Ser Arg Thr 425 Ser Val <210> 507 <211> 303 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (165) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (280) <223> Xaa equals any of the naturally occurring L-amino acids <400> 507 Glu Tyr Val Phe Pro Ala Lys Lys Leu Gln Glu Tyr Arg Val Leu Ile Thr Thr Leu Ile Thr Ala Gly Ser Trp Ser Arg Pro Ser Phe Pro 25 Leu Ile Thr Ser His Thr Ser Ser Ser Met Arg Leu Ala Thr Ala Trp 35 40 Ser Leu Arg Ser Leu Val Ala Ile Ala Gly Leu Met Glu Val Lys Glu

Thr Gly Asp Pro Gly Gly Gln Leu Val Leu Ala Gly Asp Pro Arg Gln

| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|---------------------|------------|------------|------------|
| Leu | Gly | Pro | Val | Leu 85 | Arg | Ser | Pro | Leu | Thr 90 | Gln | Lys | His | Gly | Leu 95 | Gly |
| Tyr | Ser | Leu | Leu 100 | Glu | Arg | Leu | Leu | Thr 105 | Tyr | Asn | Ser | Leu | туг 110 | Lys | Lys |
| Gly | Pro | Asp 115 | Gly | Tyr | Asp | Pro | Gln 120 | Phe | Ile | Thr | Lys | Leu 125 | Leu | Arg | Asn |
| Tyr | Arg 130 | Ser | His | Pro | Thr | Ile 135 | Leu | Asp | Ile | Pro | Asn 140 | Gln | Leu | Tyr | Tyr |
| Glu 145 | Gly | Glu | Leu | Gln | Ala 150 | Cys | Ala | Asp | Val | Val 155 | Asp | Arg | Glu | Arg | Phe 160 |
| Cys | Arg | Trp | Ala | Xaa 165 | Leu | Pro | Arg | Gln | Gly 170 | Phe | Pro | Ile | Ile | Phe 175 | His |
| Gly | Val | Met | Gly 180 | Lys | Asp | Glu | Arg | Glu 185 | Gly | Asn | Ser | Pro | Ser 190 | Phe | Phe |
| Asn | Pro | Glu 195 | Glu | Ala | Ala | Thr | Val 200 | Thr | Ser | Tyr | Leu | Lys 205 | Leu | Leu | Leu |
| Ala | Pro 210 | Ser | Ser | Lys | Lys | Gly 215 | Lys | Ala | Arg | Leu | Ser 220 | Pro | Arg | Ser | Val |
| Gly 225 | Val | Ile | Ser | Pro | Tyr 230 | Arg | Lys | Gln | Val | Glu 235 | Lys | Ile | Arg | Tyr | Cys 240 |
| Ile | Thr | Lys | Leu | Asp 245 | Arg | Glu | Leu | Arg | Gly 250 | Leu | Asp | Asp | Ile | Lys 255 | Asp |
| Leu | Lys | Val | Gly 260 | Ser | Val | Glu | Glu | Phe 265 | Gln | Gly | Gln | Glu | Arg 270 | Ser | Val |
| Ile | Leu | 11e 275 | Ser | Thr | Val | Arg | Xaa 280 | Ala | Arg | Ala | Leu | Cys 2 8 5 | Ser | Trp | Ile |
| Trp | Thr 290 | Leu | Ile | Trp | Val | Ser 295 | Leu | Arg | Thr | Pro | Arg 300 | Gly | Ser | Met | |

<210> 508

<211> 250

<212> PRT

<213> Homo sapiens

| <220 | | | | | | | | | | | | | | | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| <22 | l> s: | ITE | | | | | | | | | | | | | |
| <222 | 2> (| 16) | | | | | | | | | | | | | |
| <223 | 3> Xa | aa e | quals | s any | y of | the | nati | ıral | ly o | ccuri | ring | L-an | nino | acio | is |
| <400 |)> 50 | 80 | | | | | | | | | | | | | |
| Glu l | Gln | Tyr | Leú | Pro 5 | Leu | Thr | Glu | Glu | Glu 10 | Leu | Glu | Lys | Glu | Ala 15 | Xaa |
| Lys | Val | Glu | Gly 20 | Phe | Asp | Leu | Val | Gln 25 | Lys | Pro | Ser | Tyr | Tyr 30 | Val | Arg |
| Leu | Gly | Ser 35 | Leu | Ser | Thr | Lys | Leu 40 | His | Ser | Arg | Ala | Tyr 45 | Gln | Gln | Ala |
| Leu | Ser 50 | Arg | Val | Lys | Glu | Ala 55 | Lys | Gln | Lys | Ser | Gln 60 | Gln | Thr | Ile | Ser |
| Gln 65 | Leu | His | Ser | Thr | Val 70 | His | Leu | Ile | Glu | Phe 75 | Ala | Arg | Lys | Asn | Val 80 |
| Tyr | Ser | Ala | Asn | Gln 85 | Lys | Ile | Gln | Asp | Ala 90 | Gln | Asp | Lys | Leu | Tyr 95 | Leu |
| Ser | Trp | Val | Glu 100 | Trp | Lys | Arg | Ser | Ile 105 | Gly | Tyr | Asp | Asp | Thr 110 | Asp | Glu |
| Ser | His | Cys 115 | Ala | Glu | His | Ile | Glu 120 | Ser | Arg | Thr | Leu | Ala 125 | Ile | Ala | Arg |
| Asn | Leu 130 | Thr | Gln | Gln | Leu | Gln 135 | Thr | Thr | Суѕ | His | Thr 140 | Leu | Leu | Ser | Asn |
| 11e 145 | Gln | Gly | Val | Pro | Gln 150 | Asn | Ile | Gln | Asp | Gln 155 | Ala | Lys | His | Met | Gly 160 |
| Val | Met | Ala | Gly | Asp 165 | Ile | Туr | Ser | Val | Phe 170 | Arg | Asn | Ala | Ala | ser 175 | Phe |
| Lys | Glu | Val | Ser 180 | Asp | Ser | Leu | Leu | Thr 185 | Ser | Ser | Lys | Gly | Gln 190 | Leu | Gln |
| Lys | Met | Lys 195 | Glu | Ser | Leu | Asp | Asp 200 | Val | Met | Asp | Tyr | Leu 205 | Val | Asn | Asn |
| Thr | Pro 210 | Leu | Asn | Trp | Leu | Val 215 | Gly | Pro | Phe | туг | Pro 220 | Gln | Leu | Thr | Glu |
| Ser 225 | Gln | Asn | Ala | Gln | Asp 230 | Gln | Gly | Ala | Glu | Met 235 | Asp | Lys | Ser | Ser | Gln 240 |

465

Glu Thr Gln Arg Ser Glu His Lys Thr His 245 250

<210> 509

<211> 98

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (97)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 509

His Glu Leu Trp Gly Cys Gly Pro Val Thr Pro Arg Arg Thr Ala Pro 1 5 10 15

Ser Gly Trp Ala Gln Ala Pro Leu Ser Asp Thr Ala Gln Val Tyr Met $20 \hspace{1cm} 25 \hspace{1cm} 30$

Glu Leu Gln Gly Leu Val Asp Pro Gln Ile Gln Leu Pro Leu Leu Ala 35 . 40 . 45

Ala Arg Ser Thr Ser Cys Arg Ser Ser Leu Ile Ala Ser Gln Pro Gly
50 55 60

Pro His Gln Lys Gly Arg Gln Gly Leu Arg Gly Asn Lys Ser Phe Leu 65 70 75 80

Pro Ser Ser Trp Asn Cys Gln Asn Trp Thr Arg Gln Pro Leu Thr Ser 85 90 95

Xaa Ser

<210> 510

<211> 392

<212> PRT

<213> Homo sapiens

<400> 510

Gly Ala Met Arg Gly Asp Arg Gly Arg Gly Arg Gly Gly Arg Phe Gly
1 5 10 15

Ser Arg Gly Gly Pro Gly Gly Phe Arg Pro Phe Val Pro His Ile 20 25 30

466

Pro Phe Asp Phe Tyr Leu Cys Glu Met Ala Phe Pro Arg Val Lys Pro 35 40 45

- Ala Pro Asp Glu Thr Ser Phe Ser Glu Ala Leu Leu Lys Arg Asn Gln 50 55 60
- Asp Leu Ala Pro Asn Ser Ala Glu Gln Ala Ser Ile Leu Ser Leu Val 65 70 75 80
- Thr Lys Ile Asn Asn Val Ile Asp Asn Leu Ile Val Ala Pro Gly Thr 85 90 95
- Phe Glu Val Gln Ile Glu Glu Val Arg Gln Val Gly Ser Tyr Lys Lys
 100 105 110
- Gly Thr Met Thr Thr Gly His Asn Val Ala Asp Leu Val Val Ile Leu 115 120 125
- Lys Ile Leu Pro Thr Leu Glu Ala Val Ala Ala Leu Gly Asn Lys Val 130 135 140
- Val Glu Ser Leu Arg Ala Gln Asp Pro Ser Glu Val Leu Thr Met Leu 145 150 155 160
- Thr Asn Glu Thr Gly Phe Glu Ile Ser Ser Ser Asp Ala Thr Val Lys
 165 170 175
- Ile Leu Ile Thr Thr Val Pro Pro Asn Leu Arg Lys Leu Asp Pro Glu 180 185 190
- Leu His Leu Asp Ile Lys Val Leu Gln Ser Ala Leu Ala Ala Ile Arg 195 200 205
- His Ala Arg Trp Phe Glu Glu Asn Ala Ser Gln Ser Thr Val Lys Val 210 215 220
- Leu Ile Arg Leu Leu Lys Asp Leu Arg Ile Arg Phe Pro Gly Phe Glu 225 230 235 240
- Pro Leu Thr Pro Trp Ile Leu Asp Leu Leu Gly His Tyr Ala Val Met 245 250 255
- Asn Asn Pro Thr Arg Gln Pro Leu Ala Leu Asn Val Ala Tyr Arg Arg 260 265 270
- Cys Leu Gln Ile Leu Ala Ala Gly Leu Phe Leu Pro Gly Ser Val Gly 275 280 285
- Ile Thr Asp Pro Cys Glu Ser Gly Asn Phe Arg Val His Thr Val Met 290 295 300

467

Thr Leu Glu Gln Gln Asp Met Val Cys Tyr Thr Ala Gln Thr Leu Val 305 310 315 320

Arg Ile Leu Ser His Gly Gly Phe Arg Lys Ile Leu Gly Gln Glu Gly 325 330 335

Asp Ala Ser Tyr Leu Ala Ser Glu Ile Ser Thr Trp Asp Gly Val Ile 340 345 350

Val Thr Pro Ser Glu Lys Ala Tyr Glu Lys Pro Pro Glu Lys Lys Glu 355 360 365

Gly Glu Glu Glu Glu Glu Asn Thr Glu Glu Pro Pro Gln Gly Glu Glu 370 . 375 380

Glu Glu Ser Met Glu Thr Gln Glu 385 390

<210> 511

<211> 72

<212> PRT

<213> Homo sapiens

<400> 511

His Gly Gly Gly Lys Gly Arg Gln Val Gly Leu His Ser Val Gln Arg
1 5 10 15

Pro Ala Arg Arg Glu Thr Ala Ala Ser Trp Gly Leu Cys Val Lys Ile $20 \hspace{1cm} 25 \hspace{1cm} 30$

Pro Asp Leu Gly Val Ala Phe Val Tyr Lys Met Gln Glu Gly Lys Pro 35 40 45

Val Pro Asp Ser Ser Arg Gln His Ala Gln Leu Ser Gly Ser Pro Val 50

Ser Gln Gly Leu Ser Leu Pro Leu 65 70

<210> 512

<211> 181

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (14)

468

<223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (33) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (135) <223> Xaa equals any of the naturally occurring L-amino acids Gly Trp Cys Ser Cys Ala His Ser Ser Ala Trp Pro Gly Xaa Trp Gly 5 10 Ala Ser Gly Ile Pro Gln Gln Ala Pro Met Thr Val Cys Asp Gln Ala 25 Xaa Pro Val Thr Phe Leu Leu His Leu Glu Gly Gly Asp Ile His 35 40 45 Thr Val Ser His Leu Ser Ser Pro Pro Pro Gly Val Ala His Arg Met 55 Gly Thr Gly Gly Ser Arg Asn Pro Asn Pro Ala Trp Leu Gly Gly Ala 70 75 Leu Leu Val Arg Gly Arg Pro Ala Ser Leu Ala Pro Trp Gly His Ser 85 Trp Lys Arg Gly Leu Ala His Ala Pro Leu Arg Ala Gly Thr Cys Thr 105 Gly His Thr Arg His Ser Ala Cys Trp Asn Arg Trp Leu Cys Ser Cys 120 Ser Gly Pro Arg Ala Ala Xaa Leu Arg Pro Cys Thr Ser His Met His 130 135 Trp Thr Arg Ala Glu Thr Pro Val Cys Tyr Arg Ala Leu Val Leu Cys 150 155 Gly Pro Gly Ala Thr Ala Gln Ser Ser Gln Trp Arg Ser Thr Pro Leu 170

Asp Ser Ile Phe Phe

469

<210> 513 <211> 202 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (15) <223> Xaa equals any of the naturally occurring L-amino acids <400> 513 Leu Gly Asp Thr Ile Glu Gly Thr Pro Ala Gly Thr Val Pro Xaa Phe 10 Pro Gly Arg Pro Thr Arg Ala Ile Met Ala Gln Asp Gln Gly Glu Lys 25 Glu Asn Pro Met Arg Glu Leu Arg Ile Arg Lys Leu Cys Leu Asn Ile 40 45 Cys Val Gly Glu Ser Gly Asp Arg Leu Thr Arg Ala Ala Lys Val Leu Glu Gln Leu Thr Gly Gln Thr Pro Val Phe Ser Lys Ala Arg Tyr Thr Val Arg Ser Phe Gly Ile Arg Arg Asn Glu Lys Ile Ala Val His Cys 85 Thr Val Arg Gly Ala Lys Ala Glu Glu Ile Leu Glu Lys Gly Leu Lys Val Arg Glu Tyr Glu Leu Arg Lys Asn Asn Phe Ser Asp Thr Gly Asn 115 120 Phe Gly Phe Gly Ile Gln Glu His Ile Asp Leu Gly Ile Lys Tyr Asp

Pro Ser Ile Gly Ile Tyr Gly Leu Asp Phe Tyr Val Val Leu Gly Arg 155

Pro Gly Phe Ser Ile Ala Asp Lys Lys Arg Arg Thr Gly Cys Ile Gly 165

Ala Lys His Arg Ile Ser Lys Glu Glu Ala Met Arg Trp Phe Gln Gln 180

Lys Tyr Asp Gly Ile Ile Leu Pro Gly Lys 195

<213> Homo sapiens

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<210> 514
<211> 63
<212> PRT
<213> Homo sapiens
<220>
<221> SITE
<222> (1)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (2)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (5)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (16)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (35)
<223> Xaa equals any of the naturally occurring L-amino acids
<400> 514
Xaa Xaa Lys Asn Xaa Ile Thr Pro Lys Glu Glu Ser Pro Pro His Xaa
            5
                                    10
Ala Leu Leu Ser Lys Cys Leu Leu Thr Pro Ser Pro Lys Met Pro Pro
Ile Leu Xaa Val Met Ala Ala Leu Gly Phe Glu Arg Arg Glu Phe Gly
                            40
Ser Thr Ser Val Glu Arg Val Gln Ser Arg Gln Leu Asp Cys Phe
                         55
<210> 515
<211> 218
<212> PRT
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<220> <221> SITE <222> (151) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (209) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (211) <223> Xaa equals any of the naturally occurring L-amino acids Ser Leu Ala Arg Gly Cys Gln Arg Pro Asp Ala Val Leu Tyr Ala Arg His Tyr Asn Ile Pro Val Ile His Ala Phe Arg Arg Ala Val Asp Asp Pro Gly Leu Val Phe Asn Gln Leu Pro Lys Met Leu Tyr Pro Glu Tyr His Lys Val His Gln Met Met Arg Glu Gln Ser Ile Leu Ser Pro Ser Pro Tyr Glu Gly Tyr Arg Ser Leu Pro Arg His Gln Leu Leu Cys Phe Lys Glu Asp Cys Gln Ala Val Phe Gln Asp Leu Glu Gly Val Glu Lys 85 90 Val Phe Gly Val Ser Leu Val Leu Val Leu Ile Gly Ser His Pro Asp Leu Ser Phe Leu Pro Gly Ala Gly Ala Asp Phe Ala Val Asp Pro Asp 115 120 Gln Pro Leu Ser Ala Lys Arg Asn Pro Ile Asp Val Asp Pro Phe Thr 135 Tyr Gln Ser Thr Arg Gln Xaa Gly Leu Tyr Ala Met Gly Pro Leu Ala 150 Gly Asp Asn Phe Val Arg Phe Val Gln Gly Ala Leu Ala Val Ala 165 Ser Ser Leu Leu Arg Lys Glu Gln Asn His Leu His Arg Gln Pro Trp 180 185 190

```
Ser Ser Leu Arg Gly Ile His Pro Leu Ile Asp Leu Lys Ser Gly Val
Xaa Pro Xaa Leu Val Lys Leu Thr Ala Gln
<210> 516
<211> 41
<212> PRT
<213> Homo sapiens
<220>
<221> SITE
<222> (22)
<223> Xaa equals any of the naturally occurring L-amino acids
<400> 516
Asn Gly Arg Pro Asp Ser Thr Gly Pro Ala Ile Pro Gly Ile Leu Ser
Trp Gly Phe Glu Thr Xaa Leu Arg Asp Arg Glu Thr Asp Pro Arg Asn
Val Leu Asn Cys Asn Gly Pro His Thr
         35
<210> 517
<211> 250
<212> PRT
<213> Homo sapiens
<220>
<221> SITE
<222> (118)
<223> Kaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (161)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (204)
<223> Xaa equals any of the naturally occurring L-amino acids
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| <400> 517 | | | | | | | | | | | | | | | |
|------------|-----------|-----------|------------|------------|------------|-----------|-----------|------------|------------|------------|-----------|-----------|------------|-----------|------------|
| | | | Arg | Ser 5 | Phe | Cys | Gly | Arg | Asn 10 | Ala | Thr | Val | Tyr | Gly 15 | Lys |
| Gly | Val | Tyr | Phe 20 | Ala | Arg | Arg | Ala | Ser 25 | Leu | Ser | Val | Gln | Asp 30 | Arg | Tyr |
| Ser | Pro | Pro 35 | Asn | Ala | Asp | Gly | His 40 | Lys | Ala | Val | Phe | Val 45 | Ala | Arg | Val |
| Leu | Thr 50 | Gly | Asp | Tyr | Gly | Gln 55 | Gly | Arg | Arg | Gly | Leu 60 | Arg | Ala | Pro | Pro |
| Leu 65 | Arg | Gly | Pro | Gly | His 70 | Val | Leu | Leu | Arg | Tyr 75 | Asp | Ser | Ala | Val | Asp 80 |
| Cys | Ile | Cys | Gln | Pro 85 | Ser | Ile | Phe | Val | Ile 90 | Phe | His | Asp | Thr | Gln 95 | Ala |
| Leu | Pro | Thr | His 100 | Leu | Ile | Thr | Cys | Glu 105 | Ala | Arg | Ala | Pro | Arg 110 | Phe | Pro |
| | | 115 | | - | | | 120 | | Leu | | _ | 125 | | | |
| | 130 | | | | | 135 | | | Gln | | 140 | | | | |
| 145 | | | | | 150 | | | Ī | Pro | 155 | | | | | 160 |
| | | - | | 165 | | | | | Glu 170 | - | - | | _ | 175 | - |
| - | | | 180 | | _ | • | | 185 | Leu | • | | | 190 | - | |
| | | 195 | | | | | 200 | | Arg | | | 205 | | | |
| | 210 | | | | | 215 | | | Leu | | 220 | | | | |
| Glu 225 | Arg | Glu | Pro | Arg | Arg 230 | Lys | Gly | Pro | Gly | Lys 235 | Lys | Lys | Lys | Lys | Lys 240 |
| Lys | Lys | Lys | Lys | Lys 245 | Lys | Lys | Lys | Lys | Lys 250 | | | | | | |

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<210> 518
<211> 100
<212> PRT
<213> Homo sapiens
<220>
<221> SITE
<222> (3)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (7)
<223> Xaa equals any of the naturally occurring L-amino acids
<400> 518
Asn Pro Xaa Lys Lys Leu Xaa Ile Leu Ile Lys Trp Pro Pro Pro Phe
                                     10
Pro Pro Ser Phe Pro Pro Ser Pro Asn Ser Leu Ser Ser Ser Phe
                                25
Pro Pro Pro Leu Ser Leu Phe Ser Pro Ser Phe Thr Phe Leu Ile Ser
         35
Val Lys Leu Glu Arg Phe Glu Ile Pro Ile Lys Val Arg Leu Ser Pro
                         55
Glu Pro Trp Thr Pro Glu Thr Gly Leu Val Thr Asp Ala Phe Lys Leu
                     70
                                         75
Lys Arg Lys Glu Leu Arg Asn His Tyr Leu Lys Asp Ile Glu Arg Met
Tyr Gly Gly Lys
            100
<210> 519
<211> 60
<212> PRT
<213> Homo sapiens
<220>
<221> SITE
<222> (5)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
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<222> (17) <223> Xaa equals any of the naturally occurring L-amino acids <400> 519 His Glu Asp Gly Xaa Leu Met Gly Cys Arg His Arg Trp His Pro Arg Xaa Val Pro Phe His Gln Thr Ser Pro Lys Thr Glu Leu Glu Ser Thr 25 Ile Phe Gly Ser Pro Arg Leu Ala Ser Gly Leu Phe Pro Glu Trp Gln Ser Trp Gly Arg Met Glu Asn Leu Ala Ser Tyr Arg <210> 520 <211> 120 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (25) <223> Xaa equals any of the naturally occurring L-amino acids Ser His Pro Tyr Ala Pro Ser Cys Gly Leu Arg Gly Pro Gly Ala Ala Ser Arg Ala Arg Thr Arg Glu Arg Xaa Pro Gln Ala Glu Ala Glu Ala Arg Ser Thr Pro Gly Pro Ala Gly Ser Arg Leu Gly Pro Glu Thr Phe 35 40 Arg Gln Arg Phe Arg Gln Phe Arg Tyr Gln Asp Ala Ala Gly Pro Arg Glu Ala Phe Arg Gln Leu Arg Glu Leu Ser Arg Gln Trp Leu Arg Pro 65 70 75 Asp Ile Arg Thr Lys Glu Gln Ile Val Glu Met Leu Val Gln Glu Gln 85 Leu Leu Ala Ile Leu Pro Glu Ala Ala Arg Ala Arg Arg Ile Arg Arg

105

Arg Thr Asp Val Arg Ile Thr Gly

115 120

<210> 521

<211> 96

<212> PRT

<213> Homo sapiens

<400> 521

Gly His Gln Thr Val Ser Pro Ser Thr Gly Ser Arg Val Thr Arg Met

1 5 10 15

Phe Ser Leu Ile Ser Phe Ser His Val Phe Ile Lys Asp Ile Cys Lys
20 25 30

Leu Pro Lys Asp Glu Gly Thr Cys Arg Asp Phe Ile Leu Lys Trp Tyr
35 40 45

Tyr Asp Pro Asn Thr Lys Ser Cys Ala Arg Phe Trp Tyr Gly Gly Cys
50 60

Gly Gly Asn Glu Asn Lys Phe Gly Ser Gln Lys Glu Cys Glu Lys Val 65 70 75 80

<210> 522

<211> 122

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (18)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 522

Asn Ser Gly Phe Arg Pro Lys Asn Pro Val Gly Arg Gly Glu Pro
1 5 10 15

Glu Xaa Cys Gly Gly Ala Gly Gly Leu Gly Cys Thr Leu Val Trp Gly
20 25 30

Gly Thr Gly Ala Ala Val Val Thr Gly Val Val Trp Leu Leu Pro

35 40 45

Asn Gly Gly Val Gly Val Gly Leu Leu Gly Pro Gln Ser Pro Val Gly 50 55 60

Gly Ser Asp Ser Ala Pro Tyr Ser Leu His Pro Ala Gly Arg Thr Trp
65 70 75 80

Gly Leu Arg Ser Glu Cys Ile Pro Pro Leu Ser Phe Asn Leu Ser Cys 85 90 95

Arg Thr His Ser Gly Pro Gly Ala Arg Leu Gly Glu Ala Gly Pro Asn 100 105 110

Tyr Gly Ser Arg Glu Leu Gln Val Pro Thr 115 120

<210> 523

<211> 94

<212> PRT

<213> Homo sapiens

<400> 523

Leu Ile Pro Gln Val Cys Cys Lys His Ser Met Glu Asp Thr Asp Asp 1 5 10 15

Ser Leu Val Leu Val Phe Leu Ser Ala Val Asn Val Gln Gln Phe Ala 20 25 30

Gln Glu Leu Gly Asp His Ile Cys Leu Ser Gly Gln Gly Ser Glu Val
35 40 45

His Trp Asn Leu Leu Arg Asn Leu Phe Val Lys Thr Ile Val Asn Asn 50 55 60

Tyr Cys Ile Phe Leu Gln Lys Tyr Ile Leu Glu Asn Cys Ile Leu Ser
65 70 75 80

Ile Lys Val Phe Leu Cys Lys Lys Lys Lys Lys Leu Val 85 90

<210> 524

<211> 93

<212> PRT

<213> Homo sapiens

<220>

<221> SITE <222> (78)

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<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (86)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (93)
<223> Xaa equals any of the naturally occurring L-amino acids
<400> 524
Ser Ala Val Met Gly Arg Lys Lys Lys Gln Leu Lys Pro Trp Cys
                  5
                                     10
                                                         15
Trp Tyr Cys Asn Arg Asp Phe Asp Asp Glu Lys Ile Leu Ile Gln His
                                 25
Gln Lys Ala Lys His Phe Lys Cys His Ile Cys His Lys Lys Leu Tyr
                             40
Thr Gly Pro Gly Leu Ala Ile His Cys Met Gln Val His Lys Glu Thr
Ile Asp Ala Val Pro Asn Ala Tyr Leu Gly Glu Gln Thr Xaa Ile Gly
Asn Ile Trp Tyr Gly Xaa Tyr Ser Arg Lys Arg Tyr Xaa
                 85
<210> 525
<211> 324
<212> PRT
<213> Homo sapiens
<220>
<221> SITE
<222> (323)
<223> Xaa equals any of the naturally occurring L-amino acids
<400> 525
Asp Leu Arg Leu Ser Arg Pro Glu Ala Val Glu Ala Glu Ala Met Met
                  5
                                     10
Ala Ala Met Ala Thr Ala Arg Val Arg Met Gly Pro Arg Cys Ala Gln
                                 25
                                                     30
```

| Ala | Leu | Trp 35 | Arg | Met | Pro | Trp | Leu 40 | Pro | Val | Phe | Leu | Ser 45 | Leu | Ala | Ala |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Ala | Ala 50 | Ala | Ala | Ala | Ala | Ala 55 | Glu | Gln | Gln | Val | Pro 60 | Leu | Val | Leu | Trp |
| Ser 65 | Ser | Asp | Arg | Asp | Leu 70 | Trp | Ala | Pro | Ala | Ala 75 | Asp | Thr | His | Glu | Gly 80 |
| His | Ile | Thr | Ser | Asp 85 | Leu | Gln | Leu | Ser | Thr 90 | Tyr | Leu | Asp | Pro | Ala 95 | Leu |
| Glu | Leu | Gly | Pro 100 | Arg | Asn | Val | Leu | Leu 105 | Phe | Leu | Gln | Asp | Lys 110 | Leu | Ser |
| Ile | Glu | Asp 115 | Phe | Thr | Ala | Tyr | Gly 120 | Gly | Val | Phe | Gly | Asn 125 | Lys | Gln | Asp |
| Ser | Ala 130 | Phe | Ser | Asn | Leu | Glu 135 | Asn | Ala | Leu | Asp | Leu 140 | Ala | Pro | Ser | Ser |
| Leu 145 | Val | Leu | Pro | Ala | Val 150 | Asp | Trp | Tyr | Ala | Val 155 | Ser | Thr | Leu | Thr | Thr 160 |
| Tyr | Leu | Gln | Glu | Lys 165 | Leu | Gly | Ala | Ser | Pro 170 | Leu | His | Val | Asp | Leu 175 | Ala |
| Thr | Leu | Arg | Glu 180 | Leu | Lys | Leu | Asn | Ala 185 | Ser | Leu | Pro | Ala | Leu 190 | Leu | Leu |
| Ile | Arg | Leu 195 | Pro | Tyr | Thr | Ala | Ser 200 | Ser | Gly | Leu | Met | Ala 205 | Pro | Arg | Glu |
| Val | Leu 210 | Thr | Gly | Asn | Asp | Glu 215 | Val | Ile | Gly | Gln | Val 220 | Leu | Ser | Thr | Leu |
| Lys 225 | Ser | Glu | Asp | Val | Pro 230 | туr | Thr | Ala | Ala | Leu 235 | Thr | Ala | Val | Arg | Pro 240 |
| Ser | Arg | Val | Ala | Arg 245 | Asp | Val | Ala | Val | Val 250 | Ala | Gly | Gly | Leu | Gly 255 | Arg |
| Gln | Leu | Leu | Gln 260 | Lys | Gln | Pro | Val | Ser 265 | Pro | Val | Ile | His | Pro 270 | Pro | Val |
| Ser | Tyr | Asn 275 | Asp | Thr | Ala | Pro | Arg 280 | Ile | Leu | Phe | Trp | Ala 285 | Gln | Asn | Phe |
| Ser | Val | Ala | Tyr | Lys | Asp | Gln | Trp | Glu | Asp | Leu | Thr | Pro | Leu | Thr | Phe |

480

Gly Val Gln Glu Leu Asn Leu Thr Gly Ser Phe Trp Asn Asp Ser Phe 305 310 315 320

Ala Ser Xaa His

<210> 526

<211> 66

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (2)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 526

Phe Xaa Val Ser Trp Thr Trp Lys Gln Val Ser Glu Phe Pro Gly Asp 1 $$ 5 $$ 10 $$ 15

Gln Arg Asp Glu Val Leu Gln Leu Pro Pro Ser Ser Cys Asn Leu Val 20 25 30

Ser Ser Gly Ala Gly Gly Glu Pro Glu Lys Leu Ala Ser Tyr Ile Thr 35 40 45

Ser Leu Trp Leu Phe Phe Ile Cys Lys Thr Arg Ile Ile Leu Asn Cys 50 55 60

Lys Gly 65

<210> 527

<211> 62

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (40)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 527

Asn Thr Gln Leu Trp Phe Leu Cys Phe Pro Asn Cys Lys Ala Ala Asp 1 5 10 15 Asn Lys Thr Pro Gly Phe His Val Ser Ser Ala Met Ser Thr Leu Thr 20 25 30

Gln Ile Leu Lys Gln Asn Ser Xaa Asn Ala Val Leu Arg Ile Gln Leu 35 40 45

Leu Leu Lys Pro Ile Ser Ile Cys Ile Ile Thr Thr Asn Ile
50 55 60

<210> 528

<211> 122

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (80)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (104)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (105)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 528

Tyr Asn Lys Ile Glu Ile Met His Leu Val Met Trp Pro Thr Ser Leu l 5 10 15

Leu Thr Thr Met Asp Cys Phe Gln Gln Gln Leu Ile Phe Trp Ser Val 20 25 30

Leu Arg Gly Ala Cys Met Ser Phe Val Thr Ser Gly Ser Thr Pro Ala 35 40 45

Val Lys Tyr Cys Phe His Leu Pro Leu Gln Lys Ala Ser Cys Leu Leu 50 55 60

Thr Ser Thr Ala Lys Ala Leu Phe Trp Thr Gly Tyr Leu Ile Lys Xaa 65 70 75 80

Ile Ser Val Arg Leu Cys Ser Val Ile Pro Ser Glu Pro Arg Phe Val
85 90 95

Ser Lys Ala Thr Val Leu Ser Xaa Xaa Pro Cys Val Trp Gly Gln Val

482

Ala Ile Pro Pro Met Ser Leu Val Ile Leu
115 120

<210> 529

<211> 182

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (25)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 529

Asp Arg Thr Arg Leu Ser Gln Ala Ser Thr Pro Thr Pro Val Cys Trp 1 5 10 15

Gly Leu Leu Gln Pro Pro Pro Trp Xaa Glu Ala Trp Tyr Arg Leu Thr
20 25 30

His Arg Gly Leu Cys Gln Val Arg Phe Cys Arg Trp Ser Gln Ala Leu $35 \hspace{1.5cm} 40 \hspace{1.5cm} 45 \hspace{1.5cm}$

Pro Glu Ala Arg Gly Gly Ala Trp Ala Gly Ser Pro Gly Glu Gly Gln
50 60

Ala Gly Pro Arg Leu His Thr His Ile Gln Pro Ala Gly Leu Ser Ala 65 70 75 80

Val Leu Ser Pro Ser Leu Ser Ser Pro Ser Ser Ala Val Thr Leu Ser 85 90 95

Ser Pro Ser Leu Pro Ala Ser Pro Pro Ala Ala Pro Pro Val Lys Arg 100 105 110

Met Thr Lys Asp Leu Ser Tyr Ala Gly Ser Lys Asn Gln Asn Phe Leu . 115 120 125

Leu Ala Phe Ser Phe Val Ala Ser Pro Ala Pro Ala Leu Pro Val Ser 130 135 140

His Pro Gly Pro Arg Leu Glu Ala Ser Leu His Leu Ser Tyr Cys Phe 145 150 155 160

Lys Pro Lys Phe Thr Val Ser Val Gly Gln Asp Leu Leu Ser Pro 165 170 175 Pro Leu Leu His Pro Pro 180

<210> 530 <211> 183 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (6) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (79) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (80) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (81) <223> Xaa equals any of the naturally occurring L-amino acids Ala Leu Val Leu Gly Xaa Lys Ser Val Arg Met Ala Ser Ser Arg Met 10 Thr Arg Arg Asp Pro Leu Thr Asn Lys Val Ala Leu Val Thr Ala Ser 25 Thr Asp Gly Ile Gly Phe Ala Ser Pro Gly Val Trp Pro Arg Thr Gly 35 Pro Arg Gly Arg Gln Gln Pro Glu Ala Ala Glu Cys Gly Pro Gly Gly

Xaa Gly Lys Ala Glu Asp Arg Glu Arg Leu Val Ala Thr Ala Val Lys 85 90 95

Gly Thr Leu Gln Gly Glu Gly Leu Ser Val Thr Gly Thr Cys Xaa Xaa

55

70

Leu His Gly Gly Ile Asp Ile Leu Val Ser Asn Ala Ala Val Asn Pro $100 \hspace{1cm} 105 \hspace{1cm} 110 \hspace{1cm}$

Phe Phe Gly Ser Ile Met Asp Val Thr Glu Glu Val Trp Asp Lys Leu 120 Trp Met Asp Lys Glu Lys Glu Glu Ser Met Lys Glu Thr Leu Arg Ile 135 Arg Arg Leu Gly Glu Pro Glu Asp Cys Ala Gly Ile Val Ser Phe Leu 150 155 Cys Ser Glu Asp Ala Ser Tyr Ile Thr Gly Glu Thr Val Val Val Gly 170 Gly Gly Thr Pro Ser Arg Leu 180 <210> 531 <211> 129 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (89) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (103) <223> Xaa equals any of the naturally occurring L-amino acids <400> 531 Asn Ser Ala Pro Leu Ser Pro Thr Gly Leu Gly Gln Gly His Thr Gly 10 His Val Arg Phe Leu Ala Ala Val Gln Leu Pro Asp Gly Phe Asn Leu 25 20 Leu Cys Pro Thr Pro Pro Pro Pro Pro Asp Thr Gly Pro Glu Lys Leu 40 Pro Ser Leu Glu His Arg Asp Ser Pro Trp His Arg Gly Pro Ala Pro Ala Arg Pro Lys Met Leu Val Ile Ser Gly Gly Asp Gly Tyr Glu Asp 65 70

Phe Arg Leu Ser Ser Gly Gly Kaa Ala Val Arg Leu Trp Val Glu

85

485

Thr Thr Ala Gln Thr Thr Xaa Ser Cys Gly Gly Cys Asp Pro Val Cys
100 105 110

Arg Gly Pro Gly Leu Ala Arg Pro Pro Ala Phe Ser Leu Leu Ala Ser 115 120 125

Pro

<210> 532

<211> 91

<212> PRT

<213> Homo sapiens

<400> 532

Gly Ala Ile Ala Ser Ser Gly Pro Thr Gly Gly Arg Val Arg Lys His
1 5 10 15

Gln Leu Leu Pro Gly Ala Val Arg Glu Trp Glu Gln Leu Trp Ala Pro
20 25 30

His Phe Arg Gln Val Leu Pro Lys Pro Ser Asp Ala Val Arg Pro Gly 35 40 45

Leu Pro Val Val Leu Phe Arg Leu Cys Phe Gln Asn Ala Phe Ile Ser 50 60

Ser Val Pro Phe Gly Pro His Lys Ser Pro Trp Gly Val Gly Gly 65 70 75.

Leu Cys Arg His Pro His Phe Lys Ala Gly Ser 85 90

<210> 533

<211> 67

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (63)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 533

Asn Leu Cys Gln Val Gln Pro Thr Arg Leu Tyr Ser Ser Leu His Ser l 10 15

Gly Leu His His Val Arg Gln Val Thr Gln Lys Ser Tyr Lys Val Ser Thr Ser Gly Pro Arg Ala Phe Ser Ser Arg Ser Tyr Thr Ser Gly Pro 40 Gly Ser Arg Ile Ser Ser Ser Ala Phe Ser Arg Val Gly Gly Xaa Ser 55 Gly Gly Ala 65 <210> 534 <211> 144 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (140) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (141) <223> Xaa equals any of the naturally occurring L-amino acids <400> 534 Phe Asn Arg Arg Tyr Pro Lys Ile Gln Phe Ser Leu Ser Thr Gly Pro 10 Ser Gly Thr Met Leu Asp Gly Val Leu Glu Gly Lys Leu Asn Ala Ala Phe Ile Asp Gly Pro Ile Asn His Thr Ala Ile Asp Gly Ile Pro Val 45 Tyr Arg Glu Glu Leu Met Ile Val Thr Pro Gln Gly Tyr Ala Pro Val Thr Arg Ala Ser Gln Val Asn Gly Ser Asn Ile Tyr Ala Phe Arg Ala 75 Asn Cys Ser Tyr Arg Arg His Phe Glu Ser Trp Phe His Ala Asp Gly

Ala Ala Pro Gly Thr Ile His Glu Met Glu Ser Tyr His Gly Met Leu

105

110

| Ala | Cys | Val | Ile | Ala | Gly | Ala | Gly | Ile | Ala | Leu | Ile | Pro | Arg | Ser | Met |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | 115 | | | | | 120 | | | | | 125 | | | |

Leu Glu Ser Met Pro Gly His His Gln Val Glu Xaa Xaa Ala Val Ser 130 135 140

<210> 535

<211> 175

<212> PRT

<213> Homo sapiens

<400> 535

Arg Ala Pro Ala Arg Ile Ser Gly Gly Gly Ser Ala Met Val Gly Gly $1 \hspace{1cm} 5 \hspace{1cm} 10 \hspace{1cm} 15$

Gly Gly Val Gly Gly Leu Leu Glu Asn Ala Asn Pro Leu Ile Tyr
20 25 30

Gln Arg Ser Gly Glu Arg Pro Val Thr Ala Gly Glu Glu Asp Glu Gln 35 40 45

Val Pro Asp Ser Ile Asp Ala Arg Glu Ile Phe Asp Leu Ile Arg Ser 50 60

Ile Asn Asp Pro Glu His Pro Leu Thr Leu Glu Glu Leu Asn Val Val 65 70 75 80

Glu Gln Val Arg Val Gln Val Ser Asp Pro Glu Ser Thr Val Ala Val 85 90 95

Ala Phe Thr Pro Thr Ile Pro His Cys Ser Met Ala Thr Leu Ile Gly 100 105 110

Leu Ser Ile Lys Val Lys Leu Leu Arg Ser Leu Pro Gln Arg Phe Lys 115 120 125

Met Asp Val His Ile Thr Pro Gly Thr His Ala Ser Glu His Ala Val 130 135 140

Asn Lys Gln Leu Ala Asp Lys Glu Arg Val Ala Ala Ala Leu Glu Asn 145 150 155 160

Thr His Leu Leu Glu Val Val Asn Gln Cys Leu Ser Ala Arg Ser 165 170 175

<210> 536 <211> 148 <212> PRT <213> Homo sapiens <400> 536 Gly Trp His Arg Thr His His Arg Gly Arg His Gln Ala Arg Glu Ala Glu Glu Glu Ala Trp Ala Ala Glu Pro Ile Lys Lys Val Arg Lys 25 Ser Leu Ala Leu Asp Ile Val Asp Glu Asp Val Lys Leu Met Met Ser Thr Leu Pro Lys Ser Leu Ser Leu Pro Thr Thr Ala Pro Ser Asn Ser Ser Ser Leu Thr Leu Ser Gly Ile Lys Glu Asp Asn Ser Leu Leu Asn 65 70 75 Gln Gly Phe Leu Gln Ala Lys Pro Glu Lys Ala Ala Val Ala Gln Lys 90 Pro Arg Ser His Phe Thr Thr Pro Ala Pro Met Ser Ser Ala Trp Lys 100 105 Thr Val Ala Cys Gly Gly Thr Arg Asp Gln Leu Phe Met Gln Glu Lys 120 Ala Arg Gln Leu Leu Gly Arg Leu Lys Pro Ser His Thr Ser Arg Thr 135 140 Leu Ile Leu Ser 145 <210> 537 <211> 70

<212> PRT
<213> Homo sapiens

<220>
<221> SITE
<222> (41)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>

<221> SITE <222> (42) <223> Xaa equals any of the naturally occurring L-amino acids Arg Pro Thr Arg Ser Ala Trp Trp Gly Arg Leu Leu Ser Arg Val Ser Pro Gln Pro Arg Pro Ala Ser Pro Ser Val Ser Thr Arg Asn Gln Leu 25 . Pro Glu Ala Arg Arg Gly Val Glu Xaa Xaa Glu Cys Glu Glu Thr Ala 40 Ala Ser Ala Glu Arg Ala Gly Pro Pro Arg Ala Leu Val Phe Gly Ala 55 Gln Ser Arg Ser Pro Gly <210> 538 <211> 206 <212> PRT <213> Homo sapiens Gly Glu Val Ser Ala Ser Gly Ile Ala Arg Arg Gly Gly Pro Met Ala 1 5 10 Pro Leu Gly Gly Ala Pro Arg Leu Val Leu Phe Ser Gly Lys Arg Lys Ser Gly Lys Asp Phe Val Thr Glu Ala Leu Gln Ser Arg Leu Gly 40 Ala Asp Val Cys Ala Val Leu Arg Leu Ser Gly Pro Leu Lys Glu Gln 55 Tyr Ala Gln Glu His Gly Leu Asn Phe Gln Arg Leu Leu Asp Thr Ser Thr Tyr Lys Glu Ala Phe Arg Lys Asp Met Ile Arg Trp Gly Glu Glu Lys Arg Gln Ala Asp Pro Gly Phe Phe Cys Arg Lys Ile Val Glu Gly

. 105

Ile Ser Gln Pro Ile Trp Leu Val Ser Asp Thr Arg Arg Val Ser Asp

125

120

100

490

Ile Gln Trp Phe Arg Glu Ala Tyr Gly Ala Val Thr Gln Thr Val Arg 130 135 140

Val Val Ala Leu Glu Gln Ser Arg Gln Gln Arg Gly Trp Val Phe Thr 145 150 155 160

Pro Gly Val Asp Asp Ala Glu Ser Glu Cys Gly Leu Asp Asn Phe Gly
165 170 175

Asp Phe Asp Trp Val Ile Glu Asn His Gly Val Glu Gln Arg Leu Glu 180 185 190

Glu Gln Leu Glu Asn Leu Ile Glu Phe Ile Arg Ser Arg Leu 195 200 205

<210> 539

<211> 350

<212> PRT

<213> Homo sapiens

<400> 539

Ser Thr Leu Ile Ala Phe Ile Val Ile Ser Thr Leu Phe Pro Leu Leu 1 5 10 15

Asp Met Thr Glu Ile Tyr Phe Ser Leu Leu Asp Glu Ile Val Asp Thr
20 25 30

Leu Gly Glu Gly Ala Phe Gly Lys Val Val Glu Cys Ile Asp His Lys 35 40 45

Ala Gly Gly Arg His Val Ala Val Lys Ile Val Lys Asn Val Asp Arg
50 60

Tyr Cys Glu Ala Ala Arg Ser Glu Ile Gln Val Leu Glu His Leu Asn 65 70 75 80

Thr Thr Asp Pro Asn Ser Thr Phe Arg Cys Val Gln Met Leu Glu Trp 85 90 95

Phe Glu His His Gly His Ile Cys Ile Val Phe Glu Leu Leu Gly Leu 100 105 110

Ser Thr Tyr Asp Phe Ile Lys Glu Asn Gly Phe Leu Pro Phe Arg Leu 115 120 125

Asp His Ile Arg Lys Met Ala Tyr Gln Ile Cys Lys Ser Val Asn Phe 130 135 140

Leu His Ser Asn Lys Leu Thr His Thr Asp Leu Lys Pro Glu Asn Ile 145 150 155 Leu Phe Val Gln Ser Asp Tyr Thr Glu Ala Tyr Asn Pro Lys Ile Lys 170 Arg Asp Glu Arg Thr Leu Ile Asn Pro Asp Ile Lys Val Val Asp Phe 180 185 Gly Ser Ala Thr Tyr Asp Asp Glu His His Ser Thr Leu Val Ser Thr 200 195 Arg His Tyr Arg Ala Pro Glu Val Ile Leu Ala Leu Gly Trp Ser Gln 215 Pro Cys Asp Val Trp Ser Ile Gly Cys Ile Leu Ile Glu Tyr Tyr Leu 225 230 235 Gly Phe Thr Val Phe Pro Thr His Asp Ser Lys Glu His Leu Ala Met 250 Met Glu Arg Ile Leu Gly Pro Leu Pro Lys His Met Ile Gln Lys Thr 265 Arg Lys Arg Lys Tyr Phe His His Asp Arg Leu Asp Trp Asp Glu His Ser Ser Ala Gly Arg Tyr Val Ser Arg Arg Cys Lys Pro Leu Lys Glu 295 Phe Met Leu Ser Gln Asp Val Glu His Glu Arg Leu Phe Asp Leu Ile 305 315 Gln Lys Met Leu Glu Tyr Asp Pro Ala Lys Arg Ile Thr Leu Arg Glu Ala Leu Lys His Pro Phe Phe Asp Leu Leu Lys Lys Ser Ile 340 345

<210> 540

<211> 324

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (54)

<223> Xaa equals any of the naturally occurring L-amino acids

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<220>
<221> SITE
<222> (56)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (297)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
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<222> (304)
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<220>
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<222> (305)
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<220>
<221> SITE
<222> (317)
<223> Kaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (321)
<223> Xaa equals any of the naturally occurring L-amino acids
Gln Ala Thr Met Gly Asn Val Leu Ala Ala Ser Ser Pro Pro Ala Gly
                                    10
Pro Pro Pro Pro Ala Pro Ala Leu Val Gly Leu Pro Pro Pro
                                25
Pro Ser Pro Pro Gly Phe Thr Leu Pro Pro Leu Gly Gly Ser Leu Gly
        35
                                                45
                             40
Ala Gly Thr Ser Thr Xaa Arg Xaa Ser Glu Arg Thr Pro Gly Ala Ala
                         55
Thr Ala Ser Ala Ser Gly Ala Ala Glu Asp Gly Ala Cys Gly Cys Leu
                    70
                                       75
Pro Asn Pro Gly Thr Phe Glu Glu Cys His Arg Lys Cys Lys Glu Leu
                85
                                    90
Phe Pro Ile Gln Met Glu Gly Val Lys Leu Thr Val Asn Lys Gly Leu
           100
                                105
                                                    110
```

493

| Ser | Asn | His 115 | Phe | Gln | Val | Asn | His 120 | Thr | Val | Ala | Leu | Ser 125 | Thr | Ile | Gly |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Glu | Ser 130 | Asn | Tyr | His | Phe | Gly 135 | Val | Thr | Tyr | Val | Gly 140 | Thr | Lys | Gln | Leu |
| Ser 145 | Pro | Thr | Glu | Ala | Phe 150 | Pro | Val | Leu | Val | Gly 155 | Asp | Met | Asp | Asn | Ser 160 |
| Gly | Ser | Leu | Asn | Ala 165 | Gln | Val | Ile | His | Gln 170 | Leu | Gly | Pro | Gly | Leu 175 | Arg |
| Ser | Lys | Met | Ala 180 | Ile | Gln | Thr | Gln | Gln 185 | Ser | Lys | Phe | Val | Asn 190 | Trp | Gln |
| Val | Asp | Gly 195 | Glu | Tyr | Arg | Gly | Ser 200 | Asp | Phe | Thr | Ala | Ala 205 | Val | Thr | Leu |
| Gly | Asn 210 | Pro | Asp | Val | Leu | Val 215 | Gly | Ser | Gly | Ile | Leu 220 | Val | Ala | His | Tyr |
| Leu 225 | Gln | Ser | Ile | Thr | Pro 230 | Cys | Leu | Ala | Leu | Gly 235 | Gly | Glu | Leu | Val | Tyr 240 |
| His | Arg | Arg | Pro | Gly 245 | Glu | Glu | Gly | Thr | Val 250 | Met | Ser | Leu | Ala | Gly 255 | Lys |
| Tyr | Thr | Leu | Asn 260 | Asn | Trp | Leu | Ala | Thr 265 | Val | Thr | Leu | Gly | Gln 270 | Ala | Gly |
| Met | His | Ala 275 | Thr | Tyr | Tyr | His | Lys 280 | Ala | Ser | Asp | Gln | Leu 285 | Gln | Val | Gly |

Val Glu Phe Glu Ala Ser Thr Arg Xaa Gln Asp Thr Ser Val Ser Xaa

Xaa Val Pro Ala Trp Asn Leu Pro Lys Gly Gln Pro Xaa Leu Ser Lys

300

310 315 320

295

Xaa Leu Leu Gly

<210> 541

305

<211> 204

<212> PRT

<213> Homo sapiens

<400> 541

494

Arg Gly Pro Thr Phe Thr Pro Glu Ile Met Ala Ala Glu Asp Val Val 1 5 10 15

Ala Thr Gly Ala Asp Pro Ser Asp Leu Glu Ser Gly Gly Leu Leu His
20 25 30

Glu Ile Phe Thr Ser Pro Leu Asn Leu Leu Leu Gly Leu Cys Ile 35 40 45

Phe Leu Leu Tyr Lys Ile Val Arg Gly Asp Gln Pro Ala Ala Ser Gly 50 55 60

Asp Ser Asp Asp Asp Glu Pro Pro Pro Leu Pro Arg Leu Lys Arg Arg 65 70 75 80

Asp Phe Thr Pro Ala Glu Leu Arg Arg Phe Asp Gly Val Gln Asp Pro 85 90 95

Arg Ile Leu Met Ala Ile Asn Gly Lys Val Phe Asp Val Thr Lys Gly
100 105 110

Arg Lys Phe Tyr Gly Pro Glu Gly Pro Tyr Gly Val Phe Ala Gly Arg 115 120 125

Asp Ala Ser Arg Gly Leu Ala Thr Phe Cys Leu Asp Lys Glu Ala Leu 130 135 140

Lys Asp Glu Tyr Asp Asp Leu Ser Asp Leu Thr Ala Ala Gln Glu
145 150 155 160

Thr Leu Ser Asp Trp Glu Ser Gln Phe Thr Phe Lys Tyr His His Val 165 170 175

Gly Lys Leu Leu Lys Glu Gly Glu Glu Pro Thr Val Tyr Ser Asp Glu 180 185 190

Glu Glu Pro Lys Asp Glu Ser Ala Arg Lys Asn Asp 195 200

<210> 542

<211> 193

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (183)

<223> Xaa equals any of the naturally occurring L-amino acids

495

<400> 542

Pro Ala Tyr Ser Leu Gly Leu Leu Lys Ser Val Leu Asp Gly Gly 1 5 10 15

Ala Gly Ala His Gln Ala Arg Ser Asn Pro Ser Cys Met Tyr Pro Gln 20 25 30

Gly Thr Phe Val Ile Pro Leu Leu Val Thr Ala His Arg Asp Pro Thr 35 40 45

Gln Phe Lys Asp Pro Asp Cys Phe Asn Pro Thr Asn Phe Leu Asp Lys
50 60

Gly Lys Phe Gln Gly Asn Asp Ala Phe Met Pro Phe Ala Ser Gly Ala 65 70 75 80

Gly Arg Gly Gly Arg Gly Pro Ala Trp Thr Gly Ser Gly Val Pro Gly
85 90 95

Ala His Cys Ala Pro Val Tyr Pro Ala Lys Gln Met Cys Leu Gly Thr 100 105 110

Gly Leu Ala His Ser Gly Ile Phe Leu Phe Leu Thr Ala Thr Leu Gln 115 120 125

Arg Phe Cys Leu Leu Pro Val Val Arg Pro Gly Thr Ile Asn Leu Thr 130 140

Cys Ser Ala Leu Ala Trp Ala Val Ser Pro Gln Thr Ser Ser Ser 145 150 155 160

Gln Trp Pro Ala Glu Val Arg Leu His Tyr Gly Gly Leu Thr Gly Pro 165 170 175

Gln Thr Ser Ile Pro Ser Xaa Val Asn Lys Gly Pro Lys Leu Gln Lys 180 185 190

Lys

<210> 543

<211> 352

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (5)

<223> Xaa equals any of the naturally occurring L-amino acids

496

<220> <221> SITE <222> (154) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (167) <223> Kaa equals any of the naturally occurring L-amino acids <400> 543 Ser Thr Val Arg Xaa Pro Gly Arg Pro Thr Arg Pro Met Ala Ala Glu Glu Pro Gln Gln Gln Lys Gln Glu Pro Leu Gly Ser Asp Ser Glu Val Leu Thr Val Trp Pro Met Met Lys Pro Ser Trp Leu Ser Arg Thr Glu 40 Phe Ser Lys Arg Leu Leu Cys Arg Thr Leu Trp Cys Gln Ser Gly Trp Ser Ser Arg Ser Tyr Thr Arg Ser Met Leu Lys Met Thr Thr Ser Ile 70 Asn Arg Arg Ser Arg Thr Ser Thr Lys Ser Thr Arg Thr Ser Ala Arg Pro Gly Leu Thr Ala Thr Val Ser Ile Gly Leu Ser Asp Ser Pro Thr 105 , 110 Trp Arg His Cys Trp Met Thr Ala Arg Ser Cys Ser Gly Glu Lys Gly 120 Gly His Trp Ala Pro Arg Gln Val Gly Val Tyr Leu Leu Pro Gly Arg 135 Val Gly Cys Val Ser Ser Arg Val Ser Xaa Ser Phe Pro Gly Asp Gly 145 . 150 Leu Asp Ser Gly Leu Ala Xaa Arg Gly Ser Ala Val Ser Ala Leu Ala 165 170 Ser Gly Leu Val Glu Glu Pro Met Leu Gly Pro Pro Phe His Pro Thr 185 Pro Arg Phe Lys Ala Val Ser Ala Lys Ser Lys Glu Asp Leu Val Ser 200 195 205

Gln Gly Phe Thr Glu Phe Thr Ile Glu Asp Phe His Asn Thr Phe Met 215 220 Asp Leu Ile Glu Gln Val Glu Lys Gln Thr Ser Val Ala Asp Leu Leu 230 235 Ala Ser Phe Asn Asp Gln Ser Thr Ser Asp Tyr Leu Val Val Tyr Leu 250 Arg Leu Leu Thr Ser Gly Tyr Leu Gln Arg Glu Ser Lys Phe Phe Glu 265 His Phe Ile Glu Gly Gly Arg Thr Val Lys Glu Phe Cys Gln Gln Glu 280 Val Glu Pro Met Cys Lys Glu Ser Asp His Ile His Ile Ile Ala Leu 290 295 Ala Gln Ala Leu Ser Val Ser Ile Gln Val Glu Tyr Met Asp Arg Gly 305 310 Glu Gly Gly Thr Thr Asn Pro His Ile Phe Pro Glu Gly Ser Glu Pro 330 Lys Val Tyr Leu Leu Tyr Arg Pro Gly His Tyr Asp Ile Leu Tyr Lys

345

<210> 544

<211> 240

<212> PRT

<213> Homo sapiens

340

<400> 544

Ser Thr His Ala Ser Glu Met Ala Glu Arg Gly Tyr Ser Phe Ser Leu $1 \hspace{1.5cm} 5 \hspace{1.5cm} 10 \hspace{1.5cm} 15$

Thr Thr Phe Ser Pro Ser Gly Lys Leu Val Gln Ile Glu Tyr Ala Leu 20 25 30

Ala Ala Val Ala Gly Gly Ala Pro Ser Val Gly Ile Lys Ala Ala Asn 35 40 45

Gly Val Val Leu Ala Thr Glu Lys Lys Gln Lys Ser Ile Leu Tyr Asp 50 55 60

Glu Arg Ser Val His Lys Val Glu Pro Ile Thr Lys His Ile Gly Leu

498

| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Val | Туr | Ser | Gly | Met 85 | Gly | Pro | Asp | Туr | Arg 90 | Val | Leu | Val | His | Arg 95 | Ala |
| Arg | Lys | Leu | Ala 100 | Gln | Gln | Tyr | туr | Leu 105 | Val | туг | Gln | Glu | Pro 110 | Ile | Pro |
| Thr | Ala | Gln 115 | Leu | Val | Gln | Arg | Val 120 | Ala | Ser | Val | Met | Gln 125 | Glu | Tyr | Thr |
| Gln | Ser 130 | Gly | Gly | Val | Arg | Pro 135 | Phe | Gly | Val | Ser | Leu 140 | Leu | Ile | Cys | Gly |
| Trp 145 | Asn | Glu | Gly | Arg | Pro 150 | Tyr | Leu | Phe | Gln | Ser 155 | Asp | Pro | Ser | Gly | Ala 160 |
| Tyr | Phe | Ala | Trp | Lys 165 | Ala | Thr | Ala | Met | Gly 170 | Lys | Asn | туr | Val | Asn 175 | Gly |
| Lys | Thr | Phe | Leu 180 | Glu | Lys | Arg | Tyr | Asn 185 | Glu | Asp | Leu | Glu | Leu 190 | Glu | Asp |
| Ala | Ile | His 195 | Thr | Ala | Ile | Leu | Thr 200 | Leu | Lys | Glu | Ser | Phe 205 | Glu | Gly | Gln |
| Met | Thr 210 | Glu | Asp | Asn | Ile | Glu 215 | Val | Gly | Ile | Cys | Asn 220 | Glu | Ala | Gly | Phe |
| Arg 225 | Arg | Leu | Thr | Pro | Thr 230 | Glu | Val | Lys | Asp | Туг 235 | Leu | Ala | Ala | Ile | Ala 240 |

<210> 545

<211> 181

<212> PRT

<213> Homo sapiens

<400> 545

Arg Cys Ile Leu Tyr Thr Gly Phe Met Leu Gly Ala Gln Arg Glu Val 1 5 10 15

Asp Ser Arg Leu Leu Ala Leu Pro Gly Arg Lys Val Pro Thr Ser Trp \$20\$ \$25\$ \$30

Trp Asp Asp Leu Phe Lys Gly Ala Lys Glu His Gly Ala Val Ala Val 35 40 45

| Glu | Arg 50 | Val | Thr | Lys | Ser | Pro 55 | Gly | Glu | Thr | Ser | Lys 60 | Pro | Arg | Pro | Phe |
|--------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Ala 65 | Gly | Gly | Gly | туг | Arg 70 | Leu | Gly | Ala | Ala | Pro 75 | Glu | Glu | Glu | Ser | Ala 80 |
| Туr | Val | Ala | Gly | Glu 85 | Lys | Arg | Gln | His | Ser 90 | Ser | Gln | Asp | Val | His 95 | Val |
| Val | Leu | Lys | Leu 100 | Trp | Lys | Ser | Gly | Phe 105 | Ser | Leu | Asp | Asn | Gly 110 | Glu | Leu |
| Arg | Ser | Туг 115 | Gln | Asp | Pro | Ser | Asn 120 | Ala | Gln | Phe | Leu | Glu 125 | Ser | Ile | Arg |
| Arg | Gly 130 | Glu | Val | Pro | Ala | Glu 135 | Leu | Arg | Arg | Leu | Ala 140 | His | Gly | Gly | Gln |
| Val 145 | Asn | Leu | Asp | Met | Glu 150 | Asp | His | Arg | Asp | Glu 155 | Asp | Phe | Val | Lys | Pro 160 |
| Lys | Gly | Ala | Phe | Lys 165 | Ala | Phe | Thr | Gly | Glu 170 | Gly | Gln | Lys | Leu | Gly 175 | Ser |
| Thr | Ala | Pro | Arg 180 | Cys | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| <210 |)> 54 | 16 | | | | | | | | • | | | | | |
| <211 | > 19 | 7 | | | | | | | | | | | | | |
| <212 | > PF | T | | | | | | | | | | | | | |
| <213> Homo sapiens | | | | | | | | | | | | | | | |
| <400 | > 54 | 6 | | | | | | | | | | | | | |
| | | Val. | Ara | Ara | Ara | 717 | 7~~ | 212 | A 1 a | A 1 a | c1 | C ~ ~ | C^~ | wie | . 1 - |

Pro Arg Val Arg Arg Ala Arg Ala Ala Ala Gly Ser Ser His Ala 1 5 10 15

Ala Met Ala Asp Ser Glu Leu Gln Leu Val Glu Gln Arg Ile Arg Ser 20 25 30

Phe Pro Asp Phe Pro Thr Pro Gly Val Val Phe Arg Asp Ile Ser Pro 35 40 45

Val Leu Lys Asp Pro Ala Ser Phe Arg Ala Ala Ile Gly Leu Leu Ala 50 55 60

Arg His Leu Lys Ala Thr His Gly Gly Arg Ile Asp Tyr Ile Ala Gly 65 70 75 80

500

Leu Asp Ser Arg Gly Phe Leu Phe Gly Pro Ser Leu Ala Gln Glu Leu Gly Leu Gly Cys Val Leu Ile Arg Lys Arg Gly Lys Leu Pro Gly Pro Thr Leu Trp Ala Ser Tyr Ser Leu Glu Tyr Gly Lys Ala Glu Leu Glu 120 Ile Gln Lys Asp Ala Leu Glu Pro Gly Gln Arg Val Val Val Asp 135 Asp Leu Leu Ala Thr Gly Gly Thr Met Asn Ala Ala Cys Glu Leu Leu 155 Gly Arg Leu Gln Ala Glu Val Leu Glu Cys Val Ser Leu Val Glu Leu 170 Thr Ser Leu Lys Gly Arg Glu Lys Leu Ala Pro Val Pro Phe Phe Ser Leu Leu Gln Tyr Glu 195 <210> 547 <211> 93 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (84) <223> Xaa equals any of the naturally occurring L-amino acids <400> 547 Glu Thr Gly Lys Glu Ser Lys Ala Leu Phe Leu Pro Phe Pro Gly Ser 5 Val Tyr Ser Thr Ser Thr Gly Glu Ala Ser Gly Glu Gly Leu Ser Pro 25 Leu Pro His Leu His Glu Phe Trp Asn Ser Val Leu Leu Ala Ala Cys Phe Gln Leu Pro Pro Ile Ser Ile Ala Ala Gly Ser Ser Cys Leu Phe

Tyr Ser Val Ile Lys His Pro Ala Pro Thr Leu Ser Gln Arg Ser Ile

Leu Ile Leu Xaa Lys Lys Ile Tyr Glu Glu Lys Lys Lys 85 90

<210> 548

<211> 49

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (5)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 548

Gly Leu Gln Leu Xaa Ala His Ala Ala Gly Arg Val Pro Gly Cys Ala 1 5 10 15

Leu Gln Gly Leu Gly His Phe Leu Gln Glu Asn Lys Gln Leu Leu Arg
20 25 30

Asp Val Leu Ala Gln Glu Leu His Lys Pro Ala Phe Glu Gly Arg His 35 40 45

Ile

<210> 549

<211> 379

<212> PRT

<213> Homo sapiens

<400> 549

Val Ala Cys Cys Val Arg Ile Pro Gly Pro Pro Arg Arg Ser Gly Pro

1 10 15

Ala Met Ala Val Thr Ile Thr Leu Lys Thr Leu Gln Gln Gln Thr Phe
20 25 30

Lys Ile Arg Met Glu Pro Asp Glu Thr Val Lys Val Leu Lys Glu Lys
35 40 45

Ile Glu Ala Glu Lys Gly Arg Asp Ala Phe Pro Val Ala Gly Gln Lys 50 55 60

Leu Ile Tyr Ala Gly Lys Ile Leu Ser Asp Asp Val Pro Ile Arg Asp 65 70 75 80

| Tyr | Arg | Ile | Asp | Glu 85 | Lys | Asn | Phe | Val | Val 90 | Val | Met | Val | Thr | Lys 95 | Thr |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Lys | Ala | Gly | Gln 100 | Gly | Thr | Ser | Ala | Pro 105 | Pro | Glu | Ala | Ser | Pro 110 | Thr | Ala |
| Ala | Pro | Glu 115 | Ser | Ser | Thr | Ser | Phe 120 | Pro | Pro | Ala | Pro | Thr 125 | Ser | Gly | Met |
| Ser | His 130 | Pro | Pro | Pro | Ala | Ala 135 | Arg | Glu | Asp | Lys | Ser 140 | Pro | Ser | Glu | Glu |
| Ser 145 | Ala | Pro | Thr | Thr | Ser 150 | Pro | Glu | Ser | Val | Ser 155 | Gly. | Ser | Val | Pro | Ser 160 |
| Ser | Gly | Ser | Ser | Gly 165 | Arg | Glu | Glu | Asp | Ala 170 | Ala | Ser | Thr | Leu | Val 175 | Thr |
| Gly | Ser | Glu | Туг 180 | Glu | Thr | Met | Leu | Thr 185 | Glu | Ile | Met | Ser | Met 190 | Gly | Tyr |
| Glu | Arg | Glu 195 | Arg | Val | Val | Ala | Ala 200 | Leu | Arg | Ala | Ser | Tyr 205 | Asn | Asn | Pro |
| His | Arg 210 | Ala | Val | Glu | Tyr | Leu 215 | Leu | Thr | Gly | Ile | Pro 220 | Gly | Ser | Pro | Glu |
| Pro 225 | Glu | His | Gly | Ser | Val 230 | Gln | Glu | Ser | Gln | Val 235 | Ser | Glu | Gln | Pro | Ala 240 |
| Thr | Glu | Ala | Gly | Glu 245 | Asn | Pro | Leu | Glu | Phe 250 | Leu | Arg | Asp | Gln | Pro 255 | Gln |
| Phe | Gln | Asn | Met 260 | Arg | Gln | Val | Ile | Gln 265 | Gln | Asn | Pro | Ala | Leu 270 | Leu | Pro |
| Ala | Leu | Leu 275 | Gln | Gln | Leu | Gly | Gln 280 | Glu | Asn | Pro | Gln | Leu 285 | Leu | Gln | Gln |
| Ile | Ser 290 | Arg | His | Gln | Glu | Gln 295 | Phe | Ile | Gln | Met | Leu 300 | Asn | Glu | Pro | Pro |
| Gly 305 | Glu | Leu | Ala | Asp | 11e 310 | Ser | Asp | Val | Glu | Gly 315 | Glu | Val | Gly | Ala | 11e 320 |
| Gly | Glu | Glu | Ala | Pro 325 | Gln | Met | Asn | Tyr | 11e 330 | Gln | Val | Thr | Pro | Gln 335 | Glu |
| Lys | Glu | Ala | Ile 340 | Glu | Arg | Leu | Lys | Ala 345 | Leu | Gly | Phe | Pro | Glu 350 | Ser | Leu |

Val Ile Gln Ala Tyr Phe Ala Cys Glu Lys Asn Glu Asn Leu Ala Ala 360 Asn Phe Leu Leu Ser Gln Asn Phe Asp Asp Glu 370 375 <210> 550 . <211> 275 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (6) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (235) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (260) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (261) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (267) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (272) <223> Xaa equals any of the naturally occurring L-amino acids <400> 550 Cys Ser Cys Lys Arg Xaa His Gln Gln Gln Val Leu Pro Pro Arg Gln 10

Pro Ser Ala Leu Val Pro Ser Val Thr Glu Tyr Arg Leu Asp Gly His

25

20

| Thr | Ile | Ser 35 | Asp | Leu | Ser | Arg | Ser 40 | Ser | Arg | Gly | Glu | Leu 45 | Ile | Pro | Ile |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Ser | Pro 50 | Ser | Thr | Glu | Val | Gly 55 | Gly | Ser | Gly | Ile | Gly 60 | Thr | Pro | Pro | Ser |
| Val 65 | Leu | Lys | Arg | Gln | Arg 70 | Lys | Arg | Arg | Val | Ala 75 | Leu | Ser | Pro | Val | Thr 80 |
| Glu | Asn | Ser | Thr | Ser 85 | Leu | Ser | Phe | Leu | Asp 90 | Ser | Cys | Asn | Ser | Leu 95 | Thr |
| Pro | Lys | Ser | Thr 100 | Pro | Val | Lys | Thr | Leu 105 | Pro | Phe | Ser | Pro | Ser 110 | Gln | Phe |
| Leu | Asn | Phe 115 | Trp | Asn | Ļys | Gln | Asp 120 | Thr | Leu | Glu | Leu | Glu 125 | Ser | Pro | Ser |
| Leu | Thr 130 | Ser | Thr | Pro | Val | Cys 135 | Ser | Gln | Lys | Val | Val 140 | Val | Thr | Thr | Pro |
| Leu 145 | His | Arg | Asp | Lys | Thr 150 | Pro | Leu | His | Gln | Lys 155 | His | Ala | Ala | Phe | Val 160 |
| Thr | Pro | Asp | Gln | Lys 165 | Tyr | Ser | Met | Asp | Asn 170 | Thr | Pro | His | Thr | Pro 175 | Thr |
| Pro | Phe | Lys | Asn 180 | Ala | Leu | Glu | Lys | Туг 185 | Gly | Pro | Leu | Lys | Pro 190 | Leu | Pro |
| Gln | Thr | Pro 195 | His | Leu | Glu | Glu | Asp 200 | Leu | Lys | Glu | Val | Leu 205 | Arg | Ser | Glu |
| Ala | Gly 210 | Ile | Glu | Leu | Ile | 11e 215 | Glu | Asp | Asp | Ile | Arg 220 | Pro | Glu | Lys | Gln |
| Lys 225 | Arg | Lys | Pro | Gly | Leu 230 | Arg | Arg | Ser | Pro | Xaa 235 | Lys | Lys | Val | Arg | Lys 240 |
| Ser | Leu | Ala | Leu | Asp 245 | Ile | Val | Asp | Glu | Asp 250 | Val | Lys | Leu | Met | Met 255 | Ser |
| Thr | Leu | Pro | Xaa 260 | Xaa | Leu | Ser | Leu | Ala 265 | Thr | Xaa | Ala | Pro | Cys 270 | Lys | Xaa |
| Phe | Gln | Pro | | | | | | | | | | | | | |

<211> 161

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (158)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 551

Asn Leu Ala Ala Ala Ser Gly Gly Gly Pro Gln Ser Val Ser Gly Thr
1 5 10 15

Leu Leu Cys Glu Pro Val Leu Thr Met Phe Ala Thr Ser Gly Ala Val 20 25 30

Ala Ala Gly Lys Pro Tyr Ser Cys Ser Glu Cys Gly Lys Ser Phe Cys 35 40 45

Tyr Ser Ser Val Leu Leu Arg His Glu Arg Ala His Gly Gly Asp Gly 50 60

Arg Phe Arg Cys Leu Glu Cys Gly Glu Arg Cys Ala Arg Ala Ala Asp 65 70 75 80

Leu Arg Ala His Arg Arg Thr His Ala Gly Gln Thr Leu Tyr Ile Cys
85 90 95

Ser Glu Cys Gly Gln Ser Phe Arg His Ser Gly Arg Leu Asp Leu His
100 105 110

Leu Gly Ala His Arg Gln Arg Cys Arg Thr Cys Pro Cys Arg Thr Cys 115 120 125

Gly Arg Arg Phe Pro His Leu Pro Ala Leu Leu Leu His Arg Arg Arg 130 135 140

Gln His Leu Pro Glu Arg Pro Arg Arg Cys Pro Leu Cys Xaa Leu Arg 145 150 155 160

Phe

<210> 552

<211> 405

<212> PRT

<213> Homo sapiens

7

<400> 552

| Pro 1 | Arg | Val | Arg | Arg 5 | Arg | Ala | Arg | Gly | Arg 10 | Arg | Val | Arg | Pro | Ala 15 | Gly |
|-----------|-----------|-----------|------------|-----------|-----------|-----------|-----------|------------|-----------|-----------|------------|-----------|------------|-----------|-----------|
| Gly | Pro | Val | Arg 20 | Arg | Gly | Ala | Ala | Val 25 | Arg | Gly | Ala | Leu | Arg 30 | Gly | Ala |
| Ser | Leu | Gly 35 | His | Gly | Ala | Ala | Ala 40 | Arg | Ala | Gly | Arg | Pro 45 | Leu | Cys | Va 1 |
| Arg | His 50 | Ser | Glu | Pro | Val | Cys 55 | Gly | Ser | Asp | Ala | Asn 60 | Thr | Tyr | Ala | Asn |
| Leu 65 | Cys | Gln | Leu | Arg | Ala 70 | Ala | Ser | Arg | Arg | Ser 75 | Glu | Arg | Leu | His | Arg 80 |
| Pro | Pro | Val | Ile | Val 85 | Leu | Gln | Arg | Gly | Ala 90 | Cys · | Gly | Gln | Gly | Gln 95 | Glu |
| | | | 100 | | | | | 105 | | | Ile | | 110 | | |
| | | 115 | | | | | 120 | | | | Leu | 125 | | | |
| | 130 | | | | | 135 | | | | | Gly 140 | | | | |
| 145 | | | | | 150 | | | | | 155 | His | | | | 160 |
| | | | | 165 | | | | | 170 | | Ala | | | 175 | |
| | | | 180 | | | | | 185 | | | Ala | | 190 | | |
| | | 195 | | | | | 200 | | | | Gly | 205 | | | |
| | 210 | | | | | 215 | | | | | Ser 220 | | | | |
| 225 | | | | | 230 | | | | | 235 | Thr | | | | 240 |
| | | | | 245 | ٠ | | | | 250 | | туr | | | 255 | |
| 4TG | 116 | тте | Asn 260 | Tyr | GIY | Asn | Ser | Gly 265 | Gly | Pro | Leu | Val | Asn 270 | Leu | Asp |

Gly Glu Val Ile Gly Ile Asn Thr Leu Lys Val Thr Ala Gly Ile Ser 275 280 285

Phe Ala Ile Pro Ser Asp Lys Ile Lys Lys Phe Leu Thr Glu Ser His 290 295 300 .

Asp Arg Gln Ala Lys Gly Lys Ala Ile Thr Lys Lys Lys Tyr Ile Gly 305 310 315 320

Ile Arg Met Met Ser Leu Thr Ser Ser Lys Ala Lys Glu Leu Lys Asp 325 330 335

Arg His Arg Asp Phe Pro Asp Val Ile Ser Gly Ala Tyr Ile Ile Glu 340 345 350

Val Ile Pro Asp Thr Pro Ala Glu Ala Gly Gly Leu Lys Glu Asn Asp 355 360 365

Val Ile Ile Ser Ile Asn Gly Gln Ser Val Val Ser Ala Asn Asp Val 370 375 380

Ser Asp Val Ile Lys Arg Glu Ser Thr Leu Asn Met Val Val Arg Arg 385 390 395 400

Val Met Lys Ile Ser 405

<210> 553

<211> 107

<212> PRT

<213> Homo sapiens

<400> 553

Ala Gln Glu Asn Glu Glu Met Glu Gln Pro Met Gln Asn Gly Glu Glu
1 5 10 15

Asp Arg Pro Leu Gly Gly Gly Glu Gly His Gln Pro Ala Gly Asn Arg $20 \hspace{1cm} 25 \hspace{1cm} 30$

Arg Gly Gln Ala Arg Arg Leu Ala Pro Asn Phe Arg Trp Ala Ile Pro $35 \hspace{1cm} 40 \hspace{1cm} 45 \hspace{1cm}$

Asn Arg Gln Ile Asn Asp Gly Met Gly Gly Asp Gly Asp Met Glu 50 60

Ile Phe Met Glu Glu Met Arg Glu Ile Arg Arg Lys Leu Arg Glu Leu 65 70 75 80

Gln Leu Arg Asn Cys Leu Arg Ile Leu Met Gly Glu Leu Ser Asn His

85 90 95

His Asp His His Asp Glu Phe Cys Leu Met Pro 100 105

<210> 554

<211> 229

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (8)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (15)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (20)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (27)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (78)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 554

Gly Leu Ser Ala Glu Ser Thr Xaa Thr Ser Thr Met Pro Met Xaa Leu 1 5 10 15

Gly Tyr Trp Xaa Ile Arg Gly Leu Ala His Xaa Ile Arg Leu Leu 20 25 30

Glu Tyr Thr Asp Ser Ser Tyr Glu Glu Lys Lys Tyr Thr Met Gly Asp
35 40 45

Ala Pro Asp Tyr Asp Arg Ser Gln Trp Leu Asn Glu Lys Phe Lys Leu 50 55 60

Gly Leu Asp Phe Pro Asn Leu Pro Tyr Leu Ile Asp Gly Xaa His Lys

65 70 75 80 Ile Thr Gln Ser Asn Ala Ile Leu Arg Tyr Ile Ala Arg Lys His Asn 85 90 Leu Cys Gly Glu Ser Glu Lys Glu Gln Ile Arg Glu Asp Ile Leu Glu 105 Asn Gln Phe Met Asp Ser Arg Met Gln Leu Ala Lys Leu Cys Tyr Asp 120 Pro Asp Phe Glu Lys Leu Lys Pro Glu Tyr Leu Gln Ala Leu Pro Glu 130 135 Met Leu Lys Leu Tyr Ser Gln Phe Leu Gly Lys Gln Pro Trp Phe Leu 150 155 Gly Asp Lys Ile Thr Phe Val Asp Phe Ile Ala Tyr Asp Val Leu Glu 170 Arg Asn Gln Val Phe Glu Pro Ser Cys Leu Asp Ala Phe Pro Asn Leu 185 Lys Asp Phe Ile Ser Arg Phe Glu Gly Leu Glu Lys Ile Ser Ala Tyr 200 Met Lys Ser Ser Arg Phe Leu Pro Arg Pro Val Phe Thr Lys Met Ala - 215 Val Trp Gly Asn Lys 225 <210> 555 <211> 106 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (59) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (60) <223> Xaa equals any of the naturally occurring L-amino acids

<220><221> SITE

510

<222> (72)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (98)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 555

Asn Val Ile Ser Val Asp Pro Asn Asp Gln Lys Lys Thr Ala Cys Tyr

1 5 10 15

Asp Ile Asp Val Glu Val Asp Asp Thr Leu Lys Thr Gln Met Asn Ser 20 25 30

Phe Leu Leu Ser Thr Ala Ser Gln Gln Glu Ile Ala Thr Leu Asp Asn 35 40 45

Lys Thr Met Thr Asp Val Val Gly Asn Gln Xaa Xaa Ser Ala Glu Leu 50 60

Ser Ser Thr Ser Ser Pro Gly Xaa Gly Gly Cys Val Pro Ile Leu Leu 65 70 75 80

Leu Gln Gly Ala Ala Glu Thr Thr Arg Ile Arg Ala Ser Pro Gly Asn $85 \hspace{1cm} 90 \hspace{1cm} 95$

Pro Xaa Tyr Ile Gly Pro Leu Pro Gln Pro 100 105

<210> 556

<211> 86

<212> PRT

<213> Homo sapiens

<400> 556

Gly Arg Ala Thr Lys Gln Asn Thr Thr Lys Pro Asn His Arg Ile Ile
1 5 10 15

Phe Asn Pro Thr Phe Tyr Thr Met Pro Gln Phe Pro Ile Thr Leu His 20 25 30

Thr Ser Phe Cys Val Gln Leu Asn Cys Asn Cys Phe Leu Tyr Leu Glu 35 40 45

Arg Val Thr Ile Glu Leu Glu Thr Phe Tyr Ser Gly Arg Leu Gly Ser 50 55 60

Phe Trp Trp Asp Ser Val Gly Glu Arg Glu Glu Gly Glu Val Gly Gly

511

65 70 75 80

Leu Leu Pro Phe Arg Thr 85

<210> 557 <211> 565 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (57) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (71) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (75) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (82) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (118) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (120) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (552) <223> Xaa equals any of the naturally occurring L-amino acids <400> 557 Ala Ser Leu Thr Gly Thr Gln Ala Leu Pro Pro Leu Phe Ser Leu Gly 5

10

| Туг | His | Gln | Ser 20 | Arg | Trp | Asn | Tyr | Arg 25 | Asp | Glu | Ala | Asp | val 30 | Leu | Glu |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Val | Asp | Gln 35 | Gly | Phe | Asp | Asp | His 40 | Asn | Leu | Pro | Cys | Asp 45 | Val | Ile | Tr |
| Leu | Asp 50 | Ile | Glu | His | Ala | Asp 55 | Gly | Xaa | Arg | туг | Phe 60 | Thr | Trp | Asp | Pro |
| Ser 65 | Arg | Phe | Pro | Gln | Pro 70 | Xaa | Thr | Met | Leu | Xaa 75 | Arg | Leu | Ala | Ser | Lys |
| Arg | Xaa | Lys | Leu | Val 85 | Ala | Ile | Val | Asp | Pro 90 | His | Ile | Lys | Val | Asp 95 | Ser |
| Gly | Tyr | Arg | Val 100 | His | Glu | Glu | Leu | Arg 105 | Asn | Leu | Gly | Leu | Tyr 110 | Val | Lys |
| Thr | Arg | Asp 115 | Gly | Ser | Xaa | Tyr | Xaa 120 | Gly | Trp | Cys | Trp | Pro 125 | Gly | Ser | Ala |
| Gly | Tyr 130 | Pro | Asp | Phe | Thr | Asn 135 | Pro | Thr | Met | Arg | Ala 140 | Trp | Trp | Ala | Asr |
| Met 145 | Phe | Ser | Tyr | Asp | Asn 150 | Tyr | Glu | Gly | Ser | Ala 155 | Pro | Asn | Leu | Phe | Val |
| Trp | Asn | Asp | Met | Asn 165 | Glu | Pro | Ser | Val | Phe 170 | Asn | Gly | Pro | Glu | Val 175 | Thr |
| Met | Leu | Lys | Asp 180 | Ala | Gln | His | Tyr | Gly 185 | Gly | Trp | Glu | His | Arg 190 | Asp | Va] |
| His | Asn | Ile 195 | Tyr | Gly | Leu | Туr | Val 200 | His | Met | Ala | Thr | Ala 205 | Asp | Gly | Leu |
| Arg | Gln 210 | Arg | Ser | Gly | Gly | Met 215 | Glu | Arg | Pro | Phe | Val 220 | Leu | Ala | Arg | Ala |
| Phe 225 | Phe | Ala | Gly | Ser | Gln 230 | Arg | Phe | Gly | Ala | Val 235 | Trp | Thr | Gly | Asp | Asr 240 |
| Thr | Ala | Glu | Trp | Asp 245 | His | Leu | Lys | Ile | Ser 250 | Ile | Pro | Met | Cys | Leu 255 | Ser |
| Leu | Gly | Leu | Val 260 | Gly | Leu | Ser | Phe | Cys 265 | Gly | Ala | Asp | Val | Gly 270 | Gly | Ph€ |
| Phe | Lys | Asn 275 | Pro | Glu | Pro | Glu | Leu 280 | Leu | Val | Arg | Trp | Tyr 285 | Gln | Met | Gly |

| ATA | 19r 290 | GIn | Pro | Phe | Phe | Arg 295 | Ala | His | Ala | His | 300 | Asp | Thr | GIÀ | Arg |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Arg 305 | Glu | Pro | Trp | Leu | Leu 310 | Pro | Ser | Gln | His | Asn 315 | Asp | Ile | Ile | Arg | Asp 320 |
| Ala | Leu | Gly | Gln | Arg 325 | Tyr | Ser | Leu | Leu | Pro 330 | Phe | Trp | Tyr | Thr | Leu 335 | Leu |
| Tyr | Gln | Ala | His 340 | Arg | Glu | Gly | Ile | Pro 345 | Val | Met | Arg | Pro | Leu 350 | Trp | Val |
| Gln | Tyr | Pro 355 | Gln | Asp | Val | Thr | Thr 360 | Phe | Asn | Ile | Asp | Asp 365 | Gln | туr | Leu |
| Leu | Gly 370 | Asp | Ala | Leu | Leu | Val 375 | His | Pro | Val | ser | Asp 380 | Ser | Gly | Ala | His |
| Gly 385 | Val | Gln | Val | Tyr | Leu 390 | Pro | Gly | Gln | Gly | Glu 395 | Val | Trp | Tyr | Asp | 11e 400 |
| Gln | Ser | Tyr | Gln | Lys 405 | His | His | Gly | Pro | Gln 410 | Thr | Leu | Tyr | Leu | Pro 415 | Val |
| Thr | Leu | Ser | Ser 420 | Ile | Pro | Val | Phe | Gln 425 | Arg | Gly | Gly | Thr | Ile 430 | Val | Pro |
| Arg | Trp | Met 435 | Arg | Val | Arg | Arg | Ser 440 | Ser | Glu | Cys | Met | Lys 445 | Asp | Asp | Pro |
| Ile | Thr 450 | Leu | Phe | Val | Ala | Leu 455 | Ser | Pro | Gln | Gly | Thr 460 | Ala | Gln | Gly | Glu |
| Leu 465 | Phe | Leu | Asp | Asp | Gly 470 | His | Thr | Phe | Asn | туr 475 | Gln | Thr | Arg | Gln | Glu 480 |
| | | | Arg | 485 | | | | | 490 | | | | | 495 | |
| | | | Pro 500 | | | | | 505 | | | | | 510 | | |
| Val | Val | Ile 515 | Ile | Gly | Ala | Gly | Lys 520 | Pro | Ala | Ala | Val | Val 525 | Leu | Gln | Thr |
| • | 530 | | Pro | | | 535 | | | | | 540 | | | | |
| Ser 545 | Val | Leu | Val | Leu | Arg 550 | Lys | Xaa | Gly | Ile | Asn 555 | Val | Ala | Ser | Asp | Trp 560 |

Ser Ile His Leu Arg 565

<210> 558

<211> 160

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (39)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 558

Arg Glu Ala Val Leu Pro Gln Ala Val Leu Arg His Pro Val Arg Thr
1 5 10 15

Gln Arg Arg Glu His Arg Gly Arg Gly Leu Leu His Leu Arg Glu Ala 20 25 30

Pro Gly Gly Gly Ala Ala Xaa His Arg Pro His Arg Gly Pro Arg Gly
35 40 45

Pro Ser Arg Gly Ala Glu Gly Glu Arg Pro Pro Glu Gly Pro Ser Arg 50 55 60

Ala Ser Ser Val Thr Thr Phe Thr Gly Glu Pro Asn Thr Cys Pro Arg
65 70 75 80

Cys Ser Lys Lys Val Tyr Phe Ala Glu Lys Val Thr Ser Leu Gly Lys 85 90 95

Asp Trp His Arg Pro Cys Leu Arg Cys Glu Arg Cys Gly Lys Thr Leu 100 105 110

Thr Pro Gly Gly His Ala Glu His Asp Gly Gln Pro Tyr Cys His Lys 115 120 125

Pro Cys Tyr Gly Ile Leu Phe Gly Pro Lys Gly Val Asn Thr Gly Ala 130 135 140

Val Gly Ser Tyr Ile Tyr Asp Arg Asp Pro Glu Gly Lys Val Gln Pro 145 150 155 160

| <21 <21 | 0> 55 L> 48 2> PR 3> Ho | 30 RT | sapie | ens | | | | | | | | | | | |
|------------|----------------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| | | | | | | | | | | | | | | | |
| |)> 59 Cys | _ | Gly | Туг 5 | Leu | Val | Leu | Leu | Trp | Pro | Leu | Pro | Leu | Ile 15 | His |
| Phe | Gly | Leu | Ala 20 | Asn | Gln | Ser | Glu | Asp 25 | Leu | Ser | Val | Phe | Tyr 30 | Pro | Gly |
| Thr | Leu | Leu 35 | Glu | Thr | Gly | His | Asp 40 | Ile | Leu | Phe | Phe | Trp 45 | Val | Ala | Arg |
| Met | Val 50 | Met | Leu | Gly | Leu | Lys 55 | Leu | Thr | Gly | Arg | Leu 60 | Pro | Phe | Arg | Glu |
| Val 65 | Tyr | Leu | His | Ala | Ile 70 | Val | Arg | Asp | Ala | His 75 | Gly | Arg | Lys | Met | Ser 80 |
| Lys | Ser | Leu | Gly | Asn 85 | Val | Ile | Asp | Pro | Leu 90 | Asp | Val | Ile | Tyr | Gly 95 | Ile |
| Ser | Leu | Gln | Gly 100 | Leu | His | Asn | Gln | Leu 105 | Leu | Asn | Ser | Asn | Leu 110 | Asp | Pro |
| Ser | Glu | Val 115 | Glu | Lys | Ala | Lys | Glu 120 | Gly | Gln | Lys | Ala | Asp 125 | Phe | Pro | Ala |
| Gly | Ile 130 | Pro | Glu | Cys | Gly | Thr 135 | Asp | Ala | Leu | Arg | Phe 140 | Gly | Leu | Cys | Ala |
| Туг 145 | Met | Ser | Gln | Gly | Arg 150 | Asp | Ile | Asn | Leu | Asp 155 | Val | Asn | Arg | Ile | Leu 160 |
| Gly | Tyr | Arg | His | Phe 165 | Суѕ | Asn | Lys | Leu | Trp 170 | Asn | Ala | Thr | Lys | Phe 175 | Ala |
| Leu | Arg | Gly | Leu 180 | Gly | Lys | Gly | Phe | Val 185 | Pro | Ser | Pro | Thr | Ser 190 | Gln | Pro |
| Gly | Gly | His 195 | Glu | Ser | Leu | Val | Asp 200 | Arg | Trp | Ile | Arg | Ser 205 | Arg | Leu | Thr |
| Glu | Ala 210 | Val | Arg | Leu | Ser | Asn 215 | Gln | Gly | Phe | Gln | Ala 220 | туг | Asp | Phe | Pro |
| Ala 225 | Val | Thr | Thr | Ala | Gln 230 | Tyr | Ser | Phe | Trp | Leu 235 | Tyr | Glu | Leu | Cys | Asp 240 |

| Val | Tyr | Leu | Glu | Cys 245 | Leu | Lys | Pro | Val | Leu 250 | Asn | Gly | Val | Asp | Gln 255 | Val |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Ala | Ala | Glu | Cys 260 | Ala | Arg | Gln | Thr | Leu 265 | Tyr | Thr | Cys | Leu | Asp 270 | Val | Gly |
| Leu | Arg | Leu 275 | Leu | Ser | Pro | Phe | Met 280 | Pro | Phe | Val | Thr | Glu 285 | Glu | Leu | Phe |
| Gln | Arg 290 | Leu | Pro | Arg | Arg | Met 295 | Pro | Gln | Ala | Pro | Pro 300 | Ser | Leu | Cys | Val |
| Thr 305 | Pro | туг | Pro | Glu | Pro 310 | Ser | Glu | Суѕ | Ser | Trp 315 | Lys | Asp | Pro | Glu | Ala 320 |
| Glu | Ala | Ala | Leu | Glu 325 | Leu | Ala | Leu | Ser | Ile 330 | Thr | Arg | Ala | Val | Arg 335 | Ser |
| Leu | Arg | Ala | Asp 340 | Tyr | Asn | Leu | Thr | Arg 345 | Ile | Arg | Pro | Asp | Cys 350 | Phe | Leu |
| Glu | Val | Ala 355 | Asp | Glu | Ala | Thr | Gly 360 | Ala | Leu | Ala | Ser | Ala 365 | Val | Ser | Gly |
| Tyr | Val 370 | Gln | Ala | Leu | Ala | Ser 375 | Ala | Gly | Val | Val | Alá 380 | Val | Leu | Ala | Leu |
| Gly 385 | Ala | Pro | Ala | Pro | Gln 390 | Gly | Cys | Ala | Val | Ala 395 | Leu | Ala | Ser | Asp | Arg 400 |
| Cys | Ser | Ile | His | Leu 405 | Gln | Leu | Gln | Gly | Leu 410 | Val | Asp | Pro | Ala | Arg 415 | Glu |
| Leu | Gly | Lys | Leu 420 | Gln | Ala | Lys | Arg | Val 425 | Glu | Ala | Gln | Arg | Gln 430 | Ala | Gln |
| Arg | Leu | Arg 435 | Glu | Arg | Arg | Ala | Ala 440 | Ser | Gly | Tyr | Pro | Val 445 | Lys | Val | Pro |
| Leu | Glu 450 | Val | Gln | Glu | Ala | Asp 455 | Glu | Ala | Lys | Leu | Gln 460 | Gln | Thr | Glu | Ala |
| 31u 465 | Leu | Arg | Lys | Val | Asp 470 | Glu | Ala | Ile | Ala | Leu 475 | Phe | Gln | Lys | Met | Leu 480 |

<211> 96

<212> PRT

<213> Homo sapiens

<400> 560

Ala Cys Leu Glu Arg Cys Gly Ser Trp Arg Pro His Arg Pro Met Thr
1 5 10 15

Ser Gly Ala Arg Glu Asn Pro Ile Gln Val Pro Arg Ser Ser Leu Glu 20 25 30

Ala Thr Gly Ala Gln Glu Arg Trp Ala Glu Asp Val Pro Tyr Pro Thr 35 40 45

Thr Arg Ala Val Ser Leu Pro Pro Ser Leu Gly Val Gly Ser Thr Gly 50 55 60

Met Ser Ser Ser Arg Phe Leu Gly Ser Leu Gly Lys His Gly Arg Leu 65 70 75 80

Asp Ser Ser Arg Arg Ala Arg Leu Trp Gly Arg Gly Gly Arg Gly Gly 85 90 95

<210> 561

<211> 60

<212> PRT

<213> Homo sapiens

<400> 561

Ile Arg His Glu Ser Ser Ile Leu Ser Val Leu Phe Ile Arg Phe Leu l 5 10 15

Lys Cys Ala Asp Pro Phe Lys Thr Pro Ala Tyr Leu Cys Asn Lys Glu $20 \hspace{1cm} 25 \hspace{1cm} 30$

Lys Tyr Ser Lys Ile Leu Pro Ser Phe Ser His Thr Val Leu Lys Met 35 40 45

Leu Gln Asp Gln Ile Ile Ala His Lys Ile Arg Ser 50 55 60

<210> 562

<211> 241

<212> PRT

518

| <21 | 3> | Homo | can | ione |
|-----|----|------|-----|------|
| ~~1 | | กบแบ | วฉบ | TEHP |

| <400 | ١. | 5 | _ | 2 |
|------|----|---|---|---|

Ser Ser Met Ala Lys Pro Cys Gly Val Arg Leu Ser Gly Glu Ala Arg 1 5 10 15

Lys Gln Val Glu Val Phe Arg Gln Asn Leu Phe Gln Glu Ala Glu Glu 20 25 30

Phe Leu Tyr Arg Phe Leu Pro Gln Lys Ile Ile Tyr Leu Asn Gln Leu $35 \hspace{1cm} 40 \hspace{1cm} 45 \hspace{1cm}$

Leu Gln Glu Asp Ser Leu Asn Val Ala Asp Leu Thr Ser Leu Arg Ala 50 55 60

Pro Leu Asp Ile Pro Ile Pro Asp Pro Pro Pro Lys Asp Asp Glu Met 65 70 75 80

Glu Thr Asp Lys Gln Glu Lys Lys Glu Val Pro Lys Cys Gly Phe Leu 85 90 95

Pro Gly Asn Glu Lys Val Leu Ser Leu Leu Ala Leu Val Lys Pro Glu 100 105 110

Val Trp Thr Leu Lys Glu Lys Cys Ile Leu Val Ile Thr Trp Ile Gln 115 120 125

His Leu Ile Pro Lys Ile Glu Asp Gly Asn Asp Phe Gly Val Ala Ile 130 135 140

Gln Glu Lys Val Leu Glu Arg Val Asn Ala Val Lys Thr Lys Val Glu 145 150 155 160

Ala Phe Gln Thr Thr Ile Ser Lys Tyr Phe Ser Glu Arg Gly Asp Ala 165 170 175

Val Ala Lys Ala Ser Lys Glu Thr His Val Met Asp Tyr Arg Ala Leu 180 185 190

Val His Glu Arg Asp Glu Ala Ala Tyr Gly Glu Leu Arg Ala Met Val 195 200 205

Leu Asp Leu Arg Ala Phe Tyr Ala Glu Leu Tyr His Ile Ile Ser Ser 210 215 220

Asn Leu Glu Lys Ile Val Asn Pro Lys Gly Glu Glu Lys Pro Ser Met 225 230 235 240

Tyr

| <21 | 0> 5 | 63 | | | | | | | | | | | | | |
|----------|-----------|------|-----------|----------|------|------|------|-----------|-----------|------|-------|-------|-----------|-------------|--------------|
| <21 | 1> 2 | 00 | | | | | | | | | | | | | |
| <21 | 2> P | RT | | | | | | | | | | | | | |
| <21 | 3> н | omo | sapi | ens | | | | | | | | | | | |
| <22 | 0> | | | | | | | | | | | | | | |
| <22 | 1> s | ITE | | | | | | | | | | | | | |
| <22 | 2> (| 145) | | | | | | | | | | | | | |
| <22 | 3> X | aa e | qual | s an | y of | the | nat | ural | ly o | ccur | ring | L-a | mino | acio | ds |
| <40 | 0> 5 | 63 | | | | | | | | | | | | | |
| Leu 1 | Gly | Ser | Ile | Gln 5 | Val | Met | Gln | Ala | Val 10 | Arg | Asn | Ala | Gly | Ser 15 | Arq |
| • | | | | , | | | | | 10 | | | | | 13 | |
| Phe | Leu | Arg | Ser 20 | Trp | Thr | Тгр | Pro | Gln 25 | Thr | Ala | Gly | Arg | Val 30 | Val | Ala |
| Ara | Thr | Pro | Ala | Glv | Thr | Ile | Cys | Thr | Glv | Ala | Ara | Gln | ī.en | Gln | Acr |
| | | 35 | | 0.27 | •••• | 110 | 40 | | O1, | niu | nry | 45 | DCu | OI!! | ust |
| Ala | Ala 50 | Ala | Lys | Gln | Lys | Val | Glu | Gln | Asn | Ala | | Pro | Ser | His | Thr |
| | 50 | | | | | 23 | | | | | 60 | | | | |
| Lys | Phe | Ser | Ile | Tyr | Pro | Pro | Ile | Pro | Gly | Glu | Glu | Ser | Ser | Leu | Arg |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Trp | Ala | Gly | Lys | Lys | Phe | Glu | Glu | Ile | Pro | Ile | Ala | His | Ile | Lys | Ala |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Ser | His | Asn | Asn | Thr | Gln | Ile | Gln | Val | Val | Ser | Ala | Ser | Asn | Glu | Pro |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Leu | Ala | Phe | Ala | Ser | Cys | Gly | Thr | Glu | Glv | Phe | Arg | Asn | Ala | Lvs | Lvs |
| | | 115 | | | | • | 120 | | , | | , | 125 | | -1- | -1- |
| Glv | Thr | Glv | Tle | Δ1 a | λla | Gl n | Thr | ח ה ה | C1v | τla | A 3 a | A 1 - | ۸1. | 77 - | 7 = 0 |
| o.j | 130 | GLY | 110 | nia | nia | 135 | 1111 | WIG | GIY | 116 | 140 | MIG | WIG | AIG | ALG |
| | | | | | | | | | | | | | | | |
| | Lys | Gln | Lys | | | Ile | His | Ile | Arg | Val | Val | Val | Lys | Gly | |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Gly | Pro | Gly | Arg | Leu | Ser | Ala | Met | His | Gly | Leu | Ile | Met | Gly | Gly | Leu |
| | | - | - | 165 | | | | | 170 | | | | • | 175 | |
| Glu | Val | Ile | Ser | Ile | Thr | Asp | Asn | Thr | Pro | Ile | Pro | His | Asn | Glv | Cve |
| | | | 180 | | | | | 185 | | | | | 190 | , | -13 |
| | | | | | | | | | | | | | | | |

Arg Pro Arg Lys Ala Arg Lys Leu

520

<210> 564

<211> 115

<212> PRT

<213> Homo sapiens

<400> 564

Val Arg Leu Val Pro Gly Ala Asp Lys Tyr Asn Asp Asp Ile Arg Lys
1 5 10 15

Gly Ile Val Leu Leu Glu Glu Leu Leu Pro Lys Gly Ser Lys Glu Glu 20 25 30

Gln Arg Asp Tyr Val Phe Tyr Leu Ala Val Gly Asn Tyr Arg Leu Lys
35 40 45

Glu Tyr Glu Lys Ala Leu Lys Tyr Val Arg Gly Leu Leu Gln Thr Glu
50 55 60

Pro Gln Asn Asn Gln Ala Lys Glu Leu Glu Arg Leu Ile Asp Lys Ala 65 70 75 80

Met Lys Lys Asp Gly Leu Val Gly Met Ala Ile Val Gly Gly Met Ala 85 90 95

Leu Gly Val Ala Gly Leu Ala Gly Leu Ile Gly Leu Ala Val Ser Lys 100 105 110

Ser Lys Ser 115

<210> 565

<211> 101

<212> PRT

<213> Homo sapiens

<400> 565

Pro Thr Arg Pro Asp Glu His Asp Glu Asn Asn Ala Glu Ala Ser Ala 1 5 10 . 15

Glu Leu Ser Asn Glu Gly Val Met Asn His Arg Ser Glu Glu Glu Arg 20 25 30

Val Thr Glu Thr Gln Lys Asn Glu Arg Val Lys Lys Gln Leu Gln Ala 35 40 45

Leu Ser Ser Glu Leu Ala Gln Ala Arg Asp Glu Thr Lys Lys Thr Gln

<220>
<221> SITE
<222> (224)

521

50 55 60 Asn Asp Val Leu His Ala Glu Asn Val Lys Ala Gly Arg Asp Lys Tyr 65 70 75 Lys Thr Leu Arg Gln Ile Arg Gln Gly Asn Thr Lys Gln Arg Ile Asp Glu Phe Glu Ala Met 100 <210> 566 <211> 25 <212> PRT <213> Homo sapiens <400> 566 Thr Ala Asp Leu Val Ile Arg Pro Pro Arg Pro Leu Lys Val Leu Gly 10 Phe Cys Val Phe Cys Ala Pro Pro Leu 20 <210> 567 <211> 274 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (182) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (216) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (222) <223> Xaa equals any of the naturally occurring L-amino acids

<223> Xaa equals any of the naturally occurring L-amino acids

| <22 | U> | | | | | | | | | | | | | | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-------------|------------|------------|------------|------------|
| <22 | 1> s | ITE | | | | | | | | | | | | | |
| <22 | 2> { | 228) | | | | | | | | | | | | | |
| | - | | qual: | s an | y of | the | nati | ural | ly o | ccur | ring | L-ai | mino | acio | as |
| <22 | 0> | | | | | | | | | | | | | | |
| <22 | 1> S | ITE | | | | | | | | | | | | | |
| | | 231) | | | | | | | | | | | | | |
| | • | • | qual: | s any | y of | the | nati | ural | ly o | ccur | ring | L-ar | nino | acio | is |
| -10 | 0> 5 | c 7 | | | | | | | | | | | | | |
| | | | ~1 | **- } | 61 | | a 1 | | | | 01 - | | - | • | ~ 3 |
| 1 | ser | PIO | GIU | vai 5 | GIU | Ala | GIY | ATA | 10 | Arg | GIN | Pro | ren | 15 | GIÀ |
| Val | Ala | Gly | Gly 20 | Gln | Thr | Leu | Gly | Ala 25 | Thr | Pro | Gly | Pro | Val 30 | Met | Asn |
| Gly | Pro | Ala 35 | Asp | Gly | Glu | Val | Asp 40 | Туг | Lys | Lys | Lys | Tyr 45 | Arg | Asn | Leu |
| Lys | Arg 50 | Lys | Leu | Lys | Phe | Leu 55 | Ile | Tyr | Glu | His | Glu 60 | Cys | Phe | Gln | Glu |
| Glu 65 | Leu | Arg | Lys | Ala | Gln 70 | Arg | Lys | Leu | Leu | Lys 75 | Val | Ser | Arg | Asp | Lys 80 |
| Ser | Phe | Leu | Leu | Asp 85 | Arg | Leu | Leu | Gln | Tyr 90 | Glu | Asn | Val | Asp | Glu 95 | Asp |
| Ser | Ser | Asp | Ser 100 | Asp | Ala | Thr | Ala | Ser 105 | Ser | Asp | Asn | Ser | Glu 110 | Thr | Glu |
| Gly | Thr | Pro 115 | Lys | Leu | Ser | Asp | Thr 120 | Pro | Ala | Pro | Lys | Arg 125 | Lys | Arg | Ser |
| Pro | Pro 130 | Leu | Gly | Gly | Ala | Pro 135 | Ser | Pro | Ser | Ser | Leu 140 | Ser | Leu | Pro | Pro |
| Ser 145 | Thr | Gly | Phe | Pro | Leu 150 | Gln | Ala | Ser | Gly | Val 155 | Pro | Ser | Pro | Tyr | Leu 160 |
| Ser | Ser | Leu | Ala | Ser 165 | Ser | Arg | Tyr | Pro | Pro 170 | Phe | Pro | Ser | Asp | Туг 175 | Leu |
| Ala | Leu | Gln | Leu 180 | Pro | Xaa | Pro | Ser | Pro 185 | Leu | Arg | Pro | Lys | Arg 190 | Glu | Lys |
| Arg | Pro | Arg 195 | Leu | Pro | Arg | Lys | Leu 200 | Lys | Met | Ala | Val | Gly 205 | Pro | Pro | Asp |

Cys Pro Val Gly Gly Pro Leu Xaa Phe Pro Gly Arg Gly Xaa Gly Xaa 210 215 220 Gly Val Gly Xaa Thr Leu Xaa Pro Leu Pro Pro Pro Lys Met Pro Pro 230 Pro Thr Ile Leu Ser Thr Val Pro Arg Gln Met Phe Ser Asp Ala Gly 250 Ser Gly Asp Asp Ala Leu Asp Gly Asp Asp Asp Leu Val Ile Asp Ile 260 265 Pro Glu <210> 568 <211> 133 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (47) <223> Xaa equals any of the naturally occurring L-amino acids <400> 568 Ala Arg Gly Asp His Val Arg Ser Arg Glu Thr Gly Arg Gln Ser Ala 5 10 Ser Lys Gly Gln Ile Pro Leu Leu Pro Arg Gly Pro Ala Val Pro Gly 20 25 Gly Pro Ser Ala Gln Thr Ala Ala Gln Arg Glu Leu Arg Gly Xaa Val 40 Gly Ala Gly Ala Pro Val Tyr Leu Ala Ala Val Leu Glu Tyr Leu Thr 55 Ala Glu Ile Leu Glu Leu Ala Gly Asn Ala Ala Arg Asp Asn Lys Lys Thr Arg Ile Ile Pro Arg His Leu Gln Leu Ala Ile Arg Asn Asp Glu 90 Glu Leu Asn Lys Leu Leu Gly Lys Val Thr Ile Ala Gln Gly Gly Val 100

Leu Pro Asn Ile Gln Ala Val Leu Leu Pro Lys Lys Thr Glu Ser Gln

125

120

Lys Thr Lys Ser Lys 130

<210> 569

<211> 153

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (136)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (137)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (152)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 569

Met Cys Arg Gly Tyr Ala Trp Asn Pro Gly Ile Thr Leu Gln Asn Arg

1 5 10 15

Lys Thr Lys Glu Gly Pro Arg Ala Pro Pro Ser Arg Met Pro Glu Pro 20 25 30

Ala Gly Gly Leu Arg Gly Cys Glu Ala Val Gly Thr Leu Leu Met Lys
35 40 45

Glu Thr Val Phe Ala Leu His Pro Ser Leu Pro Leu Gly Ala Gly Ser 50 55 60

Ser Pro Ser Ala Thr Cys Ser Glu Gly Leu His Leu Arg Gly Glu Gly 65 70 75 80

Trp Gly Lys Ser Pro Pro Val Pro Phe Leu Trp Pro Cys Cys Pro His
85 90 95

Thr Gln Leu Arg Gly Pro Thr Leu Gly Lys Ala Gly Ser Ala Arg Ser 100 105 110

Leu Ser Pro Ile Ser Ala Leu Ser Ala Trp Ile Pro Ala Glu Ala Met 115 120 125

Lys Gly Asn Lys Glu Lys Arg Xaa Xaa Lys Lys Lys Lys Lys Lys Lys 130 140

Lys Lys Lys Lys Lys Lys Xaa Pro 145 150

<210> 570

<211> 327

<212> PRT

<213> Homo sapiens

<400> 570

Pro Gly Ser Pro Arg Arg Cys Asp Ile Ile Ile Ile Ser Gly Arg Lys

1 5 10 15

Glu Lys Cys Glu Ala Ala Lys Glu Ala Leu Glu Ala Leu Val Pro Val 20 25 30

Thr Ile Glu Val Glu Val Pro Phe Asp Leu His Arg Tyr Val Ile Gly 35 40 45

Gln Lys Gly Ser Gly Ile Arg Lys Met Met Asp Glu Phe Glu Val Asn 50 60

Ile His Val Pro Ala Pro Glu Leu Gln Ser Asp Ile Ile Ala Ile Thr 65 70 75 80

Gly Leu Ala Ala Asn Leu Asp Arg Ala Lys Ala Gly Leu Leu Glu Arg 85 90 95

Val Lys Glu Leu Gln Ala Glu Gln Glu Asp Arg Ala Leu Arg Ser Phe 100 105 110

Lys Leu Ser Val Thr Val Asp Pro Lys Tyr His Pro Lys Ile Ile Gly
115 120 125

Arg Lys Gly Ala Val Ile Thr Gln Ile Arg Leu Glu His Asp Val Asn 130 135 140

Ile Gln Phe Pro Asp Lys Asp Asp Gly Asn Gln Pro Gln Asp Gln Ile 145 150 155 160

Thr Ile Thr Gly Tyr Glu Lys Asn Thr Glu Ala Ala Arg Asp Ala Ile
165 170 175

Leu Arg Ile Val Gly Glu Leu Glu Gln Met Val Ser Glu Asp Val Pro 180 185 190

Leu Asp His Arg Val His Ala Arg Ile Ile Gly Ala Arg Gly Lys Ala

526

195 200 205

Ile Arg Lys Ile Met Asp Glu Phe Lys Val Asp Ile Arg Phe Pro Gln 210 220

Ser Gly Ala Pro Asp Pro Asn Cys Val Thr Val Thr Gly Leu Pro Glu 225 230 235 240

Asn Val Glu Glu Ala Ile Asp His Ile Leu Asn Leu Glu Glu Glu Tyr
245 250 255

Leu Ala Asp Val Val Asp Ser Glu Ala Leu Gln Val Tyr Met Lys Pro 260 265 270

Pro Ala His Glu Glu Ala Lys Ala Pro Ser Arg Gly Phe Val Val Arg 275 280 285

Asp Ala Pro Trp Thr Ala Ser Ser Glu Lys Ala Pro Asp Met Ser 290 295 300

Ser Ser Glu Glu Phe Pro Ser Phe Gly Ala Gln Val Ala Pro Lys Thr 305 310 315 320

Leu Pro Trp Gly Pro Lys Arg 325

<210> 571

<211> 166

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (9)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (12)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 571

Gly Asn Ser Arg Val Asp Pro Arg Xaa Arg Gly Xaa Ala His Thr Cys
1 5 10 15

Ala Pro Cys Pro Ala Pro Gly Pro Leu Ala Gly Arg Ala Val Ser Gly
20 25 30

His Gly Ser Leu Pro Pro Asp Arg Ala Pro Ser Ala Leu Ser Ser

527

35 40 45 Pro Ala Asp Glu Gly Glu Arg Arg Pro Asp Leu Asp Glu Ile His 55 Arg Glu Leu Arg Pro Gln Gly Ser Ala Arg Pro Gln Pro Asp Pro Asn Ala Glu Phe Asp Pro Asp Leu Pro Gly Gly Gly Leu His Arg Cys Leu 90 Ala Cys Ala Arg Tyr Phe Ile Asp Ser Thr Asn Leu Lys Thr His Phe 105 Arg Ser Lys Asp His Lys Lys Arg Leu Lys Gln Leu Ser Val Glu Pro 120 Tyr Ser Gln Glu Glu Ala Glu Arg Ala Ala Gly Met Gly Ser Tyr Val . 135 Pro Pro Arg Arg Leu Ala Val Pro Thr Glu Val Ser Thr Glu Val Pro 150 · 155 Glu Met Asp Thr Ser Thr 165 <210> 572 <211> 113 <212> PRT <213> Homo sapiens <400> 572 Gln Ser Ser Thr Phe His Pro Ala Pro Ala Phe Gly Ala Thr Val Ala 10 Ala Phe His Arg Arg Ala Ala Leu Arg Ala Pro Glu Pro Ala Met Ser 20 Gly Pro Asn Gly Asp Leu Gly Met Pro Val Glu Ala Gly Ala Glu Gly 40 Glu Glu Asp Gly Phe Gly Glu Ala Glu Tyr Ala Ala Ile Asn Ser Met 55 Leu Asp Gln Ile Asn Ser Cys Leu Asp His Leu Glu Glu Lys Asn Asp 70 His Leu His Ala Arg Leu Gln Glu Leu Leu Glu Ser Asn Arg Gln Thr

90

Arg Leu Glu Phe Gln Gln Gln Leu Gly Glu Ala Pro Ser Asp Ala Ser 100 105 110

528

PCT/US00/05881

Pro

<210> 573

WO 00/55173

<211> 99

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (27)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (37)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (38)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 573

Gly Ser Gly Ser Ser Arg Asp Leu His Lys Ala Leu Trp Glu Ala Gly
1 5 10 15

Trp Glu Thr Val Glu Gly Gly Cys Pro Leu Xaa Pro Arg Arg His Arg
20 25 30

Ile Trp Ala Leu Xaa Xaa Ala Phe Leu Pro Glu Tyr Ala Ala Ile Asn 35 40 45

Ser Met Leu Asp Gln Ile Asn Ser Cys Leu Asp His Leu Glu Glu Lys
50 60

Asn Asp His Leu His Ala Arg Leu Gln Glu Leu Leu Glu Ser Asn Arg 65 70 75 80

Gln Thr Arg Leu Glu Phe Gln Gln Gln Leu Gly Glu Ala Pro Ser Asp 85 90 95

Ala Ser Pro

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<210> 574
<211> 197
<212> PRT
<213> Homo sapiens
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<221> SITE
<222> (97)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (124)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
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<223> Xaa equals any of the naturally occurring L-amino acids
<400> 574
Arg Trp Ala Arg Val Glu Ala Ala Val Met Glu Gly Ala Gly Ala Gly
                                    10 ·
Ser Gly Phe Arg Lys Glu Leu Val Ser Arg Leu Leu His Leu His Phe
             20
Lys Asp Asp Lys Thr Lys Val Ser Gly Asp Ala Leu Gln Leu Met Val
Glu Leu Leu Lys Val Phe Val Val Glu Ala Ala Val Arg Gly Val Arg
                55
Gln Ala Gln Ala Glu Asp Ala Leu Arg Val Asp Val Asp Gln Leu Glu
65
                     70
Lys Val Leu Arg Ser Cys Ser Gly Leu Leu Gly Ile Ser Ala Val Ala
                                     90
Xaa Ala Thr Pro Arg Gly Ala Pro Gly Pro Gln Lys Gln Ala Leu Cys
            100
                                105
Phe Gln Arg Pro Leu Ile Arg Gly Arg Glu Gly Xaa Glu Gly Phe Gly
        115
                            120
Xaa Asp Ser Asn Lys Ile Ser Gly Ser Leu Gln Pro Val Gln Lys Gly
                        135
Gln Asp Cys Ser Ala Leu Arg Ala Leu Glu Cys Pro Val Gly Thr Leu
```

530

145 150 155 160 Val Trp Glu Gly Ala Ala Pro Gly Glu Ser Leu Pro Leu Leu Pro Gly 165 Thr Ile Val Cys Met Pro Pro Gly Val Leu Gln Ala Gly Ala Gly Lys 185 Gly Leu Ala Ser Arg 195 <210> 575 <211> 47 <212> PRT <213> Homo sapiens <400> 575 Leu Pro Met Val Asp Leu Met Glu Lys Leu Asn Ile Phe His Tyr Ala 5 Leu Gln Asn Thr Val Tyr Val Ser Ala Ser Leu Gly Asn Gly Arg Gly 25 Gln Lys Lys Val Thr Phe Asn Leu Cys Ile Phe Ala Lys Pro Tyr 40 <210> 576 <211> 115 <212> PRT <213> Homo sapiens <400> 576 Trp Ser Arg Thr Ser Gln Pro Leu Pro Ser Thr Val Gly Cys Pro Arg 10 Arg Arg Gly Phe Lys Asp Phe Gln Arg Arg Ile Leu Val Ala Thr Asn 20 25 Leu Phe Gly Arg Gly Met Asp Ile Glu Arg Val Asn Ile Ala Phe Asn 40 Tyr Asp Met Pro Glu Asp Ser Asp Thr Tyr Leu His Arg Val Ala Arg

Ala Gly Arg Phe Gly Thr Lys Gly Leu Ala Ile Thr Phe Val Ser Asp

75

70

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Glu Asn Asp Ala Lys Ile Leu Asn Asp Val Gln Asp Arg Phe Glu Val 85 90 95

Asn Ile Ser Glu Leu Pro Asp Glu Ile Asp Ile Ser Ser Tyr Ile Glu 100 105 110

Gln Thr Arg 115

<210> 577

<211> 346

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (37)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 577

Val Thr Ser Cys Val Ala Leu Leu Pro Ala Arg Arg Met Thr Tyr Thr 1 5 10 15

Thr Glu Thr Ala Leu Leu Asn Trp Ser Thr Cys Gln Met Val Leu Arg 20 25 30

Gly Ala Glu Thr Xaa Gly Cys Val Ile Val Ser Ala Ala Lys Ala Gln $35 \hspace{1cm} 40 \hspace{1cm} 45$

Leu Leu Gln Cys Gln His His Pro Ala Trp Tyr Gly Asp Thr Leu Lys $50 \hspace{1cm} 55 \hspace{1cm} 60$

Gln Lys Thr Ser Trp Thr Cys Leu Leu Asp Gly Met Gln Tyr Phe Ala 65 70 75 80

Thr Thr Glu Ser Ser Pro Thr Glu Gln Asp Gly Arg Gln Leu Trp Leu 85 90 95

Glu Val Lys Asn Ile Glu Glu His Arg Gln Arg Ser Leu Asp Ser Val 100 105 110

Gln Glu Leu Met Glu Ser Gly Gln Ala Val Gly Gly Met Val Thr Thr .115 120 125

Thr Thr Asp Trp Asn Gln Pro Ala Glu Ala Gln Gln Ala Gln Gln Val 130 135 140

Gln Arg Ile Ile Ser Arg Cys Asn Cys Arg Met Tyr Tyr Ile Ser Tyr 145 150 155 160

| Ser | His | Asp | Ile | Asp 165 | Pro | Glu | Leu | Ala | Thr 170 | Gln | Ile | Lys | Pro | Pro 175 | Glu |
|------|------------|------------|------------|------------|-----|------------|------------|------------|------------|-----|------------|------------|------------|------------|-----|
| Val | Leu | Glu | Asn 180 | Gln | Glu | Lys | Glu | Asp 185 | Leu | Leu | Lys | Lys | Gln 190 | Glu | Gly |
| Ala | Val | Asp 195 | Thr | Phe | Thr | Leu | Ile 200 | His | His | Glu | Leu | Glu 205 | Ile | Ser | Thr |
| Asn | Pro 210 | Ala | Gln | Tyr | Ala | Met 215 | Ile | Leu | Asp | Ile | Val 220 | Asn | Asn | Leu | Leu |
| 225 | | Val | | | 230 | | _ | | | 235 | | | _ | | 240 |
| | | Phe | | 245 | | | | | 250 | | | | | 255 | |
| | | Leu | 260 | | | | | 265 | | | | | 270 | | |
| | | Leu 275 | | | | | 280 | | | | | 285 | | | |
| | 290 | Lys | | | | 295 | | | | | 300 | - | | | |
| 305 | | Asn | | | 310 | | | | | 315 | | | | | 320 |
| | | Leu | | 325 | _ | | | | 330 | Gln | Leu | Gln | Arg | Ala 335 | Asn |
| Lys | Met | Glu | 140 340 | Arg | Lys | His | Lys | Lys 345 | Met | | - | | | | |
| <210 | > 57 | 18 | | | | | | | | | | | | | |
| <211 | > 91 | Į | | | | | | | | | | | | | |
| | > PF | | | | | | | | | | | | | | |
| <213 | > Hc | omo s | apie | ens | | | | | | | | | | | |
| <400 | > 57 | 8 | | | | | | | | | | | | | |

Asn Ala Pro Pro Ala Phe Glu Ser Phe Leu Leu Phe Glu Gly Glu Lys $20 \hspace{1cm} 25 \hspace{1cm} 30 \hspace{1cm}$

Arg His Glu Gly His Leu Gly Ser Gly Arg Asn Gly Gly Ser Met

```
Ile Thr Ile Asn Lys Asp Thr Lys Val Pro Asn Ala Cys Leu Phe Thr
         35
                             40
Ile Asn Lys Glu Asp His Thr Leu Gly Asn Ile Ile Lys Ser Arg Ala
                         55
Cys Phe Pro Phe Ala Phe Cys Arg Asp Cys Gln Phe Pro Glu Ala Ser
                     70
                                          75
Pro Ala Thr Leu Pro Val Gln Pro Ala Glu Leu
                 85
<210> 579
<211> 331
<212> PRT
<213> Homo sapiens
<220>
<221> SITE
<222> (18)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (20)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (300)
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<220>
<221> SITE
<222> (311)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (313)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (320)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
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| <222> (325) <223> Xaa equals any of the naturally occurring L-amino acids | | | | | | | | | | | | | | | |
|---|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| <22 | 3> X | aa e | qual | s an | y of | the | nati | ural | ly o | ccur | ring | L-a | mino | acids | |
| <400> 579 | | | | | | | | | | | | | | | |
| Gly 1 | Arg | Pro | Thr | Arg 5 | Pro | Gly | Gly | Leu | Gly 10 | Ser | Gly | Val | Leu | Ala 15 | Leu |
| Ala | Xaa | Gly | Хаа 20 | Pro | Ala | Arg | Leu | Ala 25 | Gly | Thr | Val | His | Glu 30 | Val | Gly |
| Asp | Ala | Pro 35 | Arg | Arg | Ala | Pro | Asp 40 | Gln | Ala | Ala | Glu | Ile 45 | Gly | Ser | Arg |
| Gly | Ser 50 | Thr | Lys | Ala | Gln | Gly 55 | Pro | Gln | Gln | Gln | Pro 60 | Gly | Ser | Glu | Gly |
| Pro 65 | Ser | Tyr | Ala | Lys | Lys 70 | Val | Ala | Leu | Trp | Leu 75 | Ala | Gly | Leu | Leu | Gly 80 |
| Ala | Gly | Gly | Thr | Val 85 | Ser | Val | Val | туг | Ile 90 | Phe | Gly | Asn | Asn | Pro 95 | Val |
| Asp | Glu | Asn | Gly 100 | Ala | Lys | Ile | Pro | Asp 105 | Glu | Phe | Asp | Asn | Asp 110 | Pro | Ile |
| Leu | Val | Gln 115 | Gln | Leu | Arg | Arg | Thr 120 | туг | Lys | Tyr | Phe | Lys 125 | Asp | Tyr | Arg |
| Gln | Met 130 | Ile | Ile | Glu | | Thr 135 | Ser | Pro | Cys | Leu | Leu 140 | Pro | Asp | Pro | Leu |
| Gln 145 | Glu | Pro | туг | туг | Gln 150 | Pro | Pro | Tyr | Thr | Leu 155 | Val | Leu | Glu | Leu | Thr 160 |
| Gly | Val | Leu | Leu | His 165 | Pro | Glu | Trp | Ser | Leu 170 | Ala | Thr | Gly | Trp | Arg 175 | Phe |
| Lys | Lys | Arg | Pro 180 | Gly | Ile | Glu | Thr | Leu 185 | Phe | Gln | Gln | Leu | Ala 190 | Pro | Leu |
| Туг | Glu | Ile 195 | Val | Ile | Phe | Thr | Ser 200 | Glu | Thr | Gly | Met | Thr 205 | Ala | Phe | Pro |
| Leu | Ile 210 | Asp | Ser | Val | Asp | Pro 215 | His | Gly | Phe | Ile | Ser 220 | Туг | Arg | Leu | Phe |
| Arg 225 | Asp | Ala | Thr | Arg | Туг 230 | Met | Asp | Gly | His | His 235 | Val | Lys | Asp | Ile | Ser 240 |
| Cys | Leu | Asn | Arg | Asp | Pro | Ala | Arg | Val | Val | Val | Val | Asp | Cys | Lys | Lys |

535

Glu Ala Phe Arg Leu Gln Pro Tyr Asn Gly Val Ala Leu Arg Pro Trp 265 Asp Gly Asn Ser Asp Asp Arg Val Leu Leu Asp Leu Ser Ala Phe Leu 275 280 285 Lys Thr Ile Ala Leu Asn Gly Val Gly Gly Arg Xaa Glu Pro Cys Trp 295 Glu His Tyr Ala Leu Gly Xaa Asp Xaa Pro Arg Trp Ala Ala Phe Xaa 310 315 Asn Ser Gly Lys Xaa Gly Leu Glu Ala Gly Arg 325 <210> 580 <211> 374 <212> PRT <213> Homo sapiens · <220> <221> SITE <222> (235) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (285) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (307) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (319) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (324) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (341)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (359)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 580

Pro Ser Thr Val Arg Asn Ser Arg Val Asp Pro Arg Val Arg Pro Arg

1 10 15

Val Arg Ala Gly Val Ala Ala Leu Ala Thr Val Gly Val Ala Ser Gly 20 25 30

Pro Gly Pro Gly Arg Pro Gly Pro Leu Gln Asp Glu Thr Leu Gly Val
35 40 45

Ala Ser Val Pro Ser Gln Trp Arg Ala Val Gln Gly Ile Arg Gly Glu
50 60

Thr Lys Ser Cys Gln Thr Ala Ser Ile Ala Thr Ala Ser Ala Ser Ala 65 70 75 80

Gln Ala Arg Asn His Val Asp Ala Gln Val Gln Thr Glu Ala Pro Val
85 90 95

Pro Val Ser Val Gln Pro Pro Ser Gln Tyr Asp Ile Pro Arg Leu Ala 100 105 110

Ala Phe Leu Arg Arg Val Glu Ala Met Val Ile Arg Glu Leu Asn Lys 115 120 125

Asn Trp Gln Ser His Ala Phe Asp Gly Phe Glu Val Asn Trp Thr Glu 130 135 140

Gln Gln Gln Met Val Ser Cys Leu Tyr Thr Leu Gly Tyr Pro Pro Ala 145 150 155 160

Gln Ala Gln Gly Leu His Val Thr Ser Ile Ser Trp Asn Ser Thr Gly
165 170 175

Ser Val Val Ala Cys Ala Tyr Gly Arg Leu Asp His Gly Asp Trp Ser 180 185 190

Thr Leu Lys Ser Phe Val Cys Ala Trp Asn Leu Asp Arg Asp Leu
195 200 205

Arg Pro Gln Gln Pro Ser Ala Val Val Glu Val Pro Ser Ala Val Leu 210 215 220

Cys Leu Ala Phe His Pro Thr Gln Pro Ser Xaa Val Ala Gly Gly Leu

225 . 235 240 230 Tyr Ser Gly Glu Val Leu Val Trp Asp Leu Ser Arg Leu Glu Asp Pro 245 250 Leu Leu Trp Arg Thr Gly Leu Thr Asp Asp Thr His Thr Asp Pro Val Ser Gln Val Val Trp Leu Pro Glu Pro Gly His Ser Xaa Arg Phe Gln 280 Val Leu Ser Val Ala Thr Asp Gly Lys Val Leu Leu Trp Gln Gly Ile 295 Gly Val Xaa Gln Leu Gln Phe Thr Glu Gly Phe Ala Trp Phe Xaa Gln Gln Leu Pro Xaa Ser Thr Lys Leu Lys Lys His Pro Arg Gly Arg Pro 325 330 Arg Trp Ala Pro Xaa Gln Ala Phe Phe Gln Phe Asp Leu Arg Phe Ser 345 Phe Trp Gln Glu Ala Val Xaa Val Gln Phe Ser Trp His Trp Arg Ala 360 365 Ala Leu Arg Gly Ala His 370 <210> 581 <211> 94 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (80) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (90) <223> Xaa equals any of the naturally occurring L-amino acids <400> 581 Cys Pro Asp Gln Asn Gly Trp Ala Ser Phe Gly Ala Pro Leu Ser Ala 10 Gly Gly Gln Pro Cys Tyr Leu Leu Asp Ile Gly Cys Gly Ser Gly Leu

20 30 25 Ser Gly Asp Tyr Leu Ser Asp Glu Gly His Tyr Trp Val Gly Ile Asp Ile Ser Pro Ala Met Leu Asp Ala Ala Leu Asp Arg Asp Thr Glu Gly 55 Asp Leu Leu Gly Asp Met Gly Gln Gly Ile Pro Phe Lys Pro Xaa 75 Ser Leu Met Asp Val Ser Ala Phe Cys Xaa Ser Val Ala Leu <210> 582 <211> 163 <212> PRT <213> Homo sapiens <400> 582 Pro Thr Arg Pro Ala Ala Gly Gly Ala Glu Arg Ile Ala Gly Ser Ala 10 Met Ser Ser Glu Pro Pro Pro Pro Gln Pro Pro Thr His Gln Ala 25 Ser Val Gly Leu Leu Asp Thr Pro Arg Ser Arg Glu Arg Ser Pro Ser 35 40 Pro Leu Arg Gly Asn Val Val Pro Ser Pro Leu Pro Thr Arg Arg Thr 55 Arg Thr Phe Ser Ala Thr Val Arg Ala Ser Gln Gly Pro Val Tyr Lys 70 Gly Val Cys Lys Cys Phe Cys Arg Ser Lys Gly His Gly Phe Ile Thr 85 90 Pro Ala Asp Gly Gly Pro Asp Ile Phe Leu His Ile Ser Asp Val Glu 105 Gly Glu Tyr Val Pro Val Glu Gly Asp Glu Val Thr Tyr Lys Met Cys 115 120 125 Ser Ile Pro Pro Lys Asn Glu Lys Leu Gln Ala Val Glu Val Val Ile 130 135

Thr His Leu Ala Pro Gly Thr Lys His Glu Thr Trp Ser Gly His Val

155

Ile Ser Ser

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<210> 583
<211> 293
<212> PRT
<213> Homo sapiens
<220>
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<222> (52)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (53)
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<220>
<221> SITE
<222> (58)
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<220>
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<222> (150)
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<220>
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<222> (171)
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<222> (207)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (254)
<223> Xaa equals any of the naturally occurring L-amino acids
<400> 583
Leu Leu Gly Pro Asn Leu Thr Met Gly Ser Gln Pro Gly Arg Ile Pro
                                     10
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Asp Leu Leu Glu Lys Gly Glu Arg Leu Pro Gln Pro Pro Ile Cys Thr

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WO 00/55173

| | | | 20 | | | | | 25 | | | | | 30 | | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Ile | Asp | Val 35 | Tyr | Met | Ile | Met | Val 40 | Lys | Cys | Trp | Met | Ile 45 | Asp | Ser | Glu |
| Cys | Arg 50 | Pro | Xaa | Xaa | Arg | Glu 55 | Leu | Val | Xaa | Glu | Phe 60 | Ser | Arg | Met | Ala |
| Arg 65 | Asp | Pro | Gln | Arg | Phe 70 | Val | Val | Ile | Gln | Asn 75 | Glu | Asp | Leu | Gly | Pro 80 |
| Ala | Ser | Pro | Leu | Asp 85 | Ser | Thr | Phe | туг | Arg 90 | Ser | Leu | Leu | Glu | Asp 95 | Asp |
| Asp | Met | Gly | Asp 100 | Leu | Val | Asp | Ala | Glu 105 | Glu | Tyr | Leu | Val | Pro 110 | Gln | Gln |
| Gly | Phe | Phe 115 | Cys | Pro | Asp | Pro | Ala 120 | Pro | Gly | Ala | Gly | Gly 125 | Met | Val | His |
| His | Arg 130 | His | Arg | Ser | Ser | Ser 135 | Thr | Arg | Ser | Gly | Gly 140 | Gly | Asp | Leu | Thr |
| Leu 145 | Gly | Leu | Glu | Pro | Xaa 150 | Glu | Arg | Gly | Gly | Pro 155 | Gln | Val | Ser | Thr | Gly 160 |
| Thr | Leu | Arg | Arg | Ala 165 | Gly | Ser | Asp | Val | Phe 170 | Xaa | Gly | Asp | Leu | Gly 175 | Met |
| Gly | Ala | Ala | Lys 180 | Gly | Leu | Gln | Ser | Leu 185 | Pro | Thr | His | Asp | Pro 190 | Ser | Pro |
| Leu | Gln | Arg 195 | туг | Ser | Glu | Asp | Pro 200 | Thr | Val | Pro | Leu | Pro 205 | Ser | Xaa | Thr |
| Asp | Gly 210 | Tyr | Val | Ala | Pro | Leu 215 | Thr | Cys | Ser | Pro | Gln 220 | Pro | Glu | Tyr | Val |
| Asn 225 | Gln | Pro | Asp | Val | Arg 230 | Pro | Gln | Pro | Pro | Ser 235 | Pro | Arg | Glu | Gly | Pro 240 |
| Leu | Pro | Ala | Ala | Arg 245 | Pro | Ala | Gly | Ala | Thr 250 | Leu | Glu | Arg | Xaa | Lys 255 | Thr |
| Leu | Ser | Pro | Gly 260 | Lys | Asn | Gly | Val | Val 265 | Lys | Glu | Phe | Leu | Pro 270 | Leu | Gly |
| Val | Pro | Trp 275 | Arg | Thr | Pro | Ser | Ile 280 | Asp | Thr | Pro | Gly | Glu 285 | Gly | Ala | Cys |
| Pro | Ser | Ala | Pro | Pro | | | | | | | | | | | |

<210> 584

<211> 132

<212> PRT

<213> Homo sapiens

<400> 584

Gly Gly Ala Gln Pro Gly Met Glu Gly Ala Ala Ala Thr Val His Leu 1 5 10 15

Ile Ser Gln Trp Ala Val Glu Pro Asn Ala Arg Val Gly Pro Leu Leu 20 25 30

Glu Val Glu Ala Ala Ala Asp His His Glu Ala Ala Ala Gly Ala 35 40 45

Gly Ser Ala Val Glu Lys Ile Cys Ile Asp Lys Gly Leu Thr Asp Glu
50 60

Ser Glu Ile Leu Arg Phe Leu Gln His Gly Thr Leu Val Gly Leu Leu 65 70 75 80

Pro Val Pro His Pro Ile Leu Ile Arg Lys Tyr Gln Ala Asn Ser Gly $85 \hspace{1cm} 90 \hspace{1cm} 95$

Thr Ala Met Trp Phe Arg Thr Tyr Met Trp Gly Val Ile Tyr Leu Arg 100 105 110

Asn Val Asp Pro Pro Val Trp Tyr Asp Thr Asp Val Lys Leu Phe Glu 115 120 125

Ile Gln Arg Val

<210> 585

<211> 218

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (54)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE .

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<222> (92)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (117)
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<220>
<221> SITE
<222> (140)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (141)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
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<222> (188)
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<220>
<221> SITE
<222> (199)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (200)
<223> Xaa equals any of the naturally occurring L-amino acids
<400> 585
Arg Glu Arg Cys Arg Arg Glu Ala Leu Arg Gly Ser Arg Leu Cys Pro
Ala Thr Pro Pro Ser Ala Leu Gly Ser Gln Asp Gly Ser Arg Thr Arg
             20
                                 25
                                                      30
Asp Arg Leu Gly Ala Ala Gly Trp Pro Gly Leu Val Val Gly Leu Cys
Thr Pro Ala Ala Gly Xaa Gln Arg Asp Leu Leu His Arg Arg Gly Gly
     50
                         55
                                              60
Thr Ala Ser Phe Gly Lys Ser Phe Ala Gln Lys Ser Gly Tyr Phe Leu
 65
                     70
Cys Leu Ser Ser Leu Gly Ser Leu Glu Asn Pro Xaa Glu Asn Val Val
                 85
                                     90
```

543

Ala Asp Ile Gln Ile Val Val Asp Lys Ser Pro Leu Pro Leu Gly Phe 100 105 110

Ser Pro Val Cys Xaa Pro Met Asp Ser Lys Ala Ser Val Ser Lys Lys 115 120 125

Lys Arg Met Cys Val Lys Leu Leu Pro Leu Gly Xaa Xaa Asp Thr Ala 130 135 140

Val Phe Asp Val Arg Leu Ser Gly Lys Thr Lys Thr Val Pro Gly Tyr 145 150 155 160

Leu Arg Ile Gly Asp Met Gly Gly Phe Ala Ile Trp Cys Lys Gly
165 170 175

Gln Gly Pro Glu Ala Ser Cys Pro Lys Pro Arg Xaa Pro Gln Pro Gly 180 185 190

Thr Cys Lys Gly Phe Ser Xaa Xaa Ala Ala Ser Gln Pro Lys Leu Arg 195 200 205

Ala Gly Leu Leu Gly Ser Arg Thr Ser Val 210 215

<210> 586

<211> 233

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (41)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 586

Ala Arg Gly Glu Met Glu Gly Arg Gln Val Leu Glu Val Lys Met Gln 1 5 10 15

Val Glu Tyr Met Ser Phe Ser Ala His Ala Asp Ala Lys Gly Ile Met 20 25 30

Gln Leu Val Gly Gln Ala Glu Pro Xaa Ser Val Leu Leu Val His Gly
35 40 45

Glu Ala Lys Lys Met Glu Phe Leu Lys Gln Lys Ile Glu Gln Glu Leu 50 60

Arg Val Asn Cys Tyr Met Pro Ala Asn Gly Glu Thr Val Thr Leu Pro

70 65 75 80 Thr Ser Pro Ser Ile Pro Val Gly Ile Ser Leu Gly Leu Leu Lys Arg 85 90 Glu Met Ala Gln Gly Leu Leu Pro Glu Ala Lys Lys Pro Arg Leu Leu His Gly Thr Leu Ile Met Lys Asp Ser Asn Phe Arg Leu Val Ser Ser 115 120 Glu Gln Ala Leu Lys Glu Leu Gly Leu Ala Glu His Gln Leu Arg Phe Thr Cys Arg Val His Leu His Asp Thr Arg Lys Glu Gln Glu Thr Ala 150 155 Leu Arg Val Tyr Ser His Leu Lys Ser Val Leu Lys Asp His Cys Val 165 170 Gln His Leu Pro Asp Gly Ser Val Thr Val Glu Ser Val Leu Leu Gln 185 Ala Ala Pro Ser Glu Asp Pro Gly Thr Lys Val Leu Leu Val Ser 200 Trp Thr Tyr Gln Asp Glu Glu Leu Gly Ser Phe Leu Thr Ser Leu Leu 215 220 Lys Lys Gly Leu Pro Gln Ala Pro Ser 225 230 <210> 587 <211> 116 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (100) <223> Xaa equals any of the naturally occurring L-amino acids <400> 587 Gly Pro Leu Ser His His Ile Arg Ala Gln Leu Ser Lys Met Leu Leu 5 10 Ala Arg Lys Gln Ile Leu Cys Val Asn Val Lys Asn Phe Ala Val Ile

25

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Tyr Leu Val Asp Ile Thr Glu Val Pro Asp Phe Asn Lys Met Tyr Glu 35 40 45

Leu Tyr Asp Pro Cys Thr Val Met Phe Phe Arg Asn Lys His Ile
50 55 60

Met Ile Asp Leu Gly Thr Gly Asn Asn Asn Lys Ile Asn Trp Ala Met 65 70 75 80

Glu Asp Lys Gln Glu Met Val Asp Ile Ile Glu Thr Val Tyr Arg Gly 85 90 95

Ala Arg Lys Xaa Arg Gly Leu Val Val Ser Pro Lys Asp Tyr Ser Thr

Lys Tyr Arg Tyr 115

<210> 588

<211> 133

<212> PRT

<213> Homo sapiens

<400> 588

Ala Arg Ala Ala Val Gly Arg Thr Ala Gly Val Arg Thr Trp Ala Pro 1 5 10 15

Leu Ala Met Ala Ala Lys Val Asp Leu Ser Thr Ser Thr Asp Trp Lys
20 25 30

Glu Ala Lys Ser Phe Leu Lys Gly Leu Ser Asp Lys Gln Arg Glu Glu
35 40 45

His Tyr Phe Cys Lys Asp Phe Val Arg Leu Lys Lys Ile Pro Thr Trp 50 55 60

Lys Glu Met Ala Lys Gly Val Ala Val Lys Val Glu Glu Pro Arg Tyr 65 70 .75 80

Lys Lys Asp Lys Gln Leu Asn Glu Lys Ile Ser Leu Leu Arg Ser Asp
85 90 95

Ile Thr Lys Leu Glu Val Asp Ala Ile Val Asn Ala Ala Asn Ser Ser 100 105 110

Pro Pro Pro Arg Ser Leu Ile Lys Asp Leu Arg Cys Gly Lys Lys 115 120 125

Lys Lys Lys Lys

<210> 589

<211> 163

<212> PRT

<213> Homo sapiens

<400> 589

Arg His Arg Gly Gln Pro Leu Arg Gln Thr Arg Ala Ser Ser Ser Pro $1 \hspace{1cm} 5 \hspace{1cm} 10 \hspace{1cm} 15$

Gln Leu Ala Gly Arg Ser Ser Ser Val Leu Pro Ala Ala Ala Gln Pro 20 25 30

Cys Thr Pro Thr Met Asp Val Phe Lys Lys Gly Phe Ser Ile Ala Lys $35 \hspace{1.5cm} 40 \hspace{1.5cm} 45$

Glu Gly Val Val Gly Ala Val Glu Lys Thr Lys Gln Gly Val Thr Glu
50 55 60

Ala Ala Glu Lys Thr Lys Glu Gly Val Met Tyr Val Gly Ala Lys Thr 65 70 75 80

Lys Glu Asn Val Val Gln Ser Val Thr Ser Val Ala Glu Lys Thr Lys 85 90 95

Glu Gln Ala Asn Ala Val Ser Glu Ala Val Val Ser Ser Val Asn Thr $100 \hspace{1cm} 105 \hspace{1cm} 110$

Val Ala Thr Lys Thr Val Glu Glu Ala Glu Asn Ile Ala Val Thr Ser 115 120 125

Gly Val Val Arg Lys Glu Asp Leu Arg Pro Ser Ala Pro Gln Glu 130 135 140

Gly Glu Ala Ser Lys Glu Lys Glu Glu Val Ala Glu Glu Ala Gln Ser 145 150 155 160

Gly Gly Asp

<210> 590

<211> 59

<212> PRT

<213> Homo sapiens

<400> 590

547

Arg Ala Leu Leu Cys Leu Gly His His Pro Leu Leu Ala Gln Gly Val 1 5 10 15

Pro Ala Leu Ser Asp Met Arg Leu Pro Thr Leu Leu Pro Ser Ser Pro 20 25 30

Trp Pro Pro Leu Ala Cys Pro Pro Val Leu Leu His Gln Pro His Cys 35 40 45

Pro Pro Ser Ala Pro Pro Thr Leu Trp Ser Phe 50 55

<210> 591

<211> 116

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (31)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 591

Val His Ala Glu Ala Gly Arg Leu Cys His Gly Asp Cys Pro Arg Leu 1 5 10 15

Cys Arg Pro Arg Gln Arg Ser Ala Pro Val Gln Val Tyr Thr Xaa Arg 20 25 30

Gln Ala Ala Leu His Gly Arg Pro Gln Arg Asp Pro Cys Val Gly 35 40 45

Pro Arg Pro Leu Arg Cys Ser Arg Asp Cys Gly Gly His Gln Arg 50 55 60

Leu Val Met Pro Gly Thr Trp Thr Gln Ala Trp Gln Arg Arg Gln Val
65 70 75 80

Val Asn Gly Leu Met Leu Gly Gln Ala Arg Ile His Val Asn Arg Leu 85 90 95

Glu Gln Ala Val Val Asn Leu Ala Pro Cys Glu Tyr Phe His Thr Cys 100 105 110

Cys Pro Phe Ala

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548 .

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<210> 592
<211> 290
<212> PRT
<213> Homo sapiens
<220>
<221> SITE
<222> (30)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (239)
<223> Xaa equals any of the naturally occurring L-amino acids
<400> 592
Arg Arg Ser Leu Asn Thr His Gly Ser Gly Val Ser Val Cys Leu Gln
                                    10
Ser Leu Thr Leu Leu Ala Thr Leu Cys Pro Gly Asp Gln Xaa Ser Leu
                                 25
Gly Leu Leu Thr Pro Cys Tyr Ser Gly Ser Glu Pro Ser Gly Thr Phe
Gly Pro Val Asn Pro Ser Leu Asn Asn Thr Tyr Glu Phe Met Ser Thr
                         55
                                             60
Phe Phe Leu Glu Val Ser Ser Val Phe Pro Asp Phe Tyr Leu His Leu
 65
                     70
Gly Gly Asp Glu Val Asp Phe Thr Cys Trp Lys Ser Asn Pro Glu Ile
Gln Asp Phe Met Arg Lys Lys Gly Phe Gly Glu Asp Phe Lys Gln Leu
            100
                                105
                                                    110
Glu Ser Phe Tyr Ile Gln Thr Leu Leu Asp Ile Val Ser Ser Tyr Gly
Lys Gly Tyr Val Val Trp Gln Glu Val Phe Asp Asn Lys Val Lys Ile
                        135
Gln Pro Asp Thr Ile Ile Gln Val Trp Arg Glu Asp Ile Pro Val Asn
145
                    150
Tyr Met Lys Glu Leu Glu Leu Val Thr Lys Ala Gly Phe Arg Ala Leu
                                    170
Leu Ser Ala Pro Trp Tyr Leu Asn Arg Ile Ser Tyr Gly Pro Asp Trp
                                185
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Lys Asp Phe Tyr Val Val Glu Pro Leu Ala Phe Glu Gly Thr Pro Glu 195 200 205

Gln Lys Ala Leu Val Ile Gly Glu Glu Ala Cys Met Trp Gly Glu Tyr 210 215 220

Val Asp Asn Thr Asn Leu Val Pro Arg Leu Trp Pro Arg Ala Xaa Ala 225 230 235 240

Val Ala Glu Arg Leu Trp Ser Asn Lys Leu Thr Ser Asp Leu Thr Phe
245 250 255

Ala Tyr Glu Arg Leu Ser His Phe Arg Cys Glu Leu Leu Arg Arg Gly 265 270

Val Gln Ala Gln Pro Leu Asn Val Gly Phe Cys Glu Gln Glu Phe Glu 275 280 285

Gln Thr 290

<210> 593

<211> 665

<212> PRT

. <213> Homo sapiens

<220>

<221> SITE

<222> (8)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 593

Asp Ala Asp Gly Arg Met Asp Xaa Leu Val Ser Glu Cys Ser Ala Arg

1 10 15

Leu Leu Gln Gln Glu Glu Ile Lys Ser Leu Thr Ala Glu Ile Asp 20 25 30

Arg Leu Lys Asn Cys Gly Cys Leu Gly Ala Ser Pro Asn Leu Glu Gln 35 40 45

Leu Gln Glu Glu Asn Leu Lys Leu Lys Tyr Arg Leu Asn Ile Leu Arg 50 55 60

Lys Ser Leu Gln Ala Glu Arg Asn Lys Pro Thr Lys Asn Met Ile Asn 65 70 75 80

Ile Ile Ser Arg Leu Gln Glu Val Phe Gly His Ala Ile Lys Ala Ala

| | | | | 85 | | | | | 90 | | | | | 95 | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Tyr | Pro | Asp | Leu 100 | Glu | Asn | Pro | Pro | Leu 105 | Leu | Val | Thr | Pro | Ser 110 | Gln | Gln |
| Ala | Lys | Phe 115 | Gly | Asp | туг | Gln | Cys 120 | Asn | Ser | Ala | Met | Gly 125 | Ile | Ser | Gln |
| Met | Leu 130 | Lys | Thr | Lys · | Glu | Gln 135 | Lys | Val | Asn | Pro | Arg 140 | Glu | Ile | Ala | Glu |
| Asn 145 | Ile | Thr | Lys | His | Leu 150 | Pro | Asp | Asn | Glu | Cys 155 | Ile | Glu | Lys | Val | Glu 160 |
| Ile | Ala | Gly | Pro | Gly 165 | Phe | Ile | Asn | Val | His 170 | Leu | Arg | Lys | Asp | Phe 175 | Val |
| Ser | Glu | Gln | Leu 180 | Thr | Ser | Leu | | Val 185 | Asn | Gly | Val | Gln | Leu 190 | Pro | Ala |
| Leu | Gly | Glu 195 | Asn | Lys | Lys | Val | Ile 200 | Val | Asp | Phe | Ser | ser 205 | Pro | Asn | Ile |
| Ala | Lys 210 | Glu | Met | His | Val | Gly 215 | His | Leu | Arg | Ser | Thr 220 | | Ile | Gly | Glu |
| Ser 225 | Ile | Ser | Arg | Leu | Phe 230 | Glu | Phe | Ala | Gly | Tyr 235 | Asp | Val | Leu | Arg | Leu 240 |
| Asn | His | Val | Gly | Asp 245 | Trp | Gly | Thr | Gln | Phe 250 | Gly | Met | Leu | Ile | Ala 255 | His |
| Leu | Gln | Asp | Lys 260 | Phe | Pro | Asp | Tyr | Leu 265 | Thr | Val | Ser | Pro | Pro 270 | Ile | Gly |
| Asp | Leu | Gln 275 | Val | Phe | Туr | Lys | Glu 280 | Ser | Lys | Lys | Arg | Phe 285 | Asp | Thr | Glu |
| Glu | Glu 290 | Phe | Lys | Lys | Arg | Ala 295 | Tyr | Gln | Cys | Val | Val 300 | Leu | Leu | Gln | Gly |
| Lys 305 | Asn | Pro | Asp | Ile | Thr 310 | Lys | Ala | Trp | Lys | Leu 315 | Ile | Суѕ | Asp | Val | Ser 320 |
| | | | | 325 | Lys | | | | 330 | | | | | 335 | |
| | | | 340 | | Phe | | | 345 | | | | | 350 | | |
| Glu | Phe | Glu | Asp | Arg | Gly | Phe | Val | Gln | Val | Asp | Asp | Gly | Arg | Lys | Ile |

WO 00/55173

| Val | Phe 370 | Val | Pro | Gly | Cys | Ser 375 | Ile | Pro | Leu | Thr | Ile 380 | Val | Lys | Ser | Asp |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Gly 385 | Gly | Tyr | Thr | туг | Asp 390 | Thr | Ser | Asp | Leu | Ala 395 | Ala | Ile | Lys | Gln | Arg 400 |
| Leu | Phe | Glu | Glu | Lys 405 | Ala | Asp | Met | Ile | Ile 410 | Tyr | Val | Val | Asp | Asn 415 | Gly |
| Gln | Ser | Val | His 420 | Phe | Gln | Thr | Ile | Phe 425 | Ala | Ala | Ala | Gln | Met 430 | Ile | Gly |
| Trp | туг | Asp 435 | Pro | Lys | Val | Thr | Arg 440 | Val | Phe | His | Ala | Gly 445 | Phe | Gly | Val |
| Val | Leu 450 | Gly | Glu | Asp | Lys | Lys 455 | Lys | Phe | Lys | Thr | Arg 460 | Ser | Gly | Glu | Thr |
| Val 465 | Arg | Leu | Met | Asp | Leu 470 | Leu | Gly | Glu | Gly | Leu 475 | Lys | Arg | Ser | Met | Asp 480 |
| Lys | Leu | Lys | Glu | Lys 485 | Glu | Arg | Asp | Lys | Val 490 | Leu | Thr | Ala | Glu | Glu 495 | Leu |
| Asn | Ala | Ala | Gln 500 | Thr | Ser | Val | Ala | Туг 505 | Gly | Суѕ | Ile | Lys | Tyr 510 | Ala | Asp |
| Leu | Ser | His 515 | Asn | Arg | Leu | Asn | Asp 520 | Tyr | Ile | Phe | Ser | Phe 525 | Asp | Ùуs | Met |
| Leu | Asp 530 | Asp | Arg | Gly | Asn | Thr 535 | Ala | Ala | Tyr | Leu | Leu 540 | Tyr | Ala | Phe | Thr |
| Arg 545 | Ile | Arg | Ser | Ile | Ala 550 | Arg | Leu | Ala | Asn | Ile 555 | Asp | Glu | Glu | Met | Leu 560 |
| Gln | Lys | Ala | Ala | Arg 565 | Glu | Thr | Lys | Ile | Leu 570 | Leu | Asp | His | Glu | Lys 575 | Glu |
| Trp | Lys | Leu | Gly 580 | Arg | Cys | Ile | Leu | Arg 585 | Phe | Pro | Glu | Ile | Leu 590 | Gln | Lys |
| Ile | Leu | Asp 595 | Asp | Leu | Phe | Leu | His 600 | Thr | Leu | Cys | Asp | Туг 605 | Ile | Tyr | Glu |
| Leu | Ala 610 | Thr | Ala | Phe | Thr | Glu 615 | Phe | туг | Asp | Ser | Cys 620 | Tyr | Cys | Val | Glu |
| Lys | Asp | Arg | Gln | Thr | Gly | Lys | Ile | Leu | Lys | Val | Asn | Met | Trp | Arg | Met |

625 630 635 640

Leu Leu Cys Glu Ala Val Ala Val Met Ala Lys Gly Phe Asp Ile 645 650 655

Leu Gly Ile Lys Pro Val Gln Arg Met 660 . 665

<210> 594

<211> 116

<212> PRT

<213> Homo sapiens

<400> 594

Thr Val Thr Glu Thr Thr Val Thr Val Thr Glu Pro Glu Asn Arg

1 5 10 15

Ser Leu Thr Ile Lys Leu Arg Lys Arg Lys Pro Glu Lys Lys Val Glu 20 25 30

Trp Thr Ser Asp Thr Val Asp Asn Glu His Met Gly Arg Arg Ser Ser 35 40 45

Lys Cys Cys Cys Ile Tyr Glu Lys Pro Arg Ala Phe Gly Glu Ser Ser 50 55 60

Thr Glu Ser Asp Glu Glu Glu Glu Glu Gly Cys Gly His Thr His Cys 65 70 75 80

Val Arg Gly His Arg Lys Gly Arg Arg Arg Ala Thr Leu Gly Pro Thr
85 90 95

Pro Thr Thr Pro Pro Gln Pro Pro Asp Pro Ser Gln Pro Pro Pro Gly 100 105 110

Pro Met Gln His

<210> 595

<211> 294

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (269)

<223> Xaa equals any of the naturally occurring L-amino acids

| <22 | 0> | | | | | | | | | | | | | | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| <22 | 1> s | ITE | | | | | | | | | | | | | |
| <22 | 2> (| 278) | | | | | | | | | | | | | |
| <22 | 3> X | aa e | gual: | s an | y of | the | nati | ural: | ly o | ccur | ring | L-ar | nino | acio | is |
| <40 | 0> 59 | 95 | | | | | | | | | | | | | |
| Thr 1 | Gln | Leu | Arg | Val 5 | Ser | Glu | Arg | Glu | Gly 10 | Pro | Gly | Asp | Pro | Gln 15 | Arg |
| Phe | Ser | Asp | His 20 | Thr | Leu | Arg | Thr | Pro 25 | Arg | Leu | Glu | Asp | Arg 30 | Pro | Gly |
| Asp | Ala | Met 35 | Trp | Gly | Glu | Gly | Leu 40 | Arg | Ala | Trp | Cys | Arg 45 | Phe | Val | Glu |
| Asn | Arg 50 | Trp | Cys | Leu | Lys | Arg 55 | Val | Ser | Ala | Pro | Leu 60 | His | Leu | Gly | Let |
| Նeu 65 | Gly | Cys | Pro | Asp | Ala 70 | Glu | Ala | His | Phe | Pro 75 | Ala | Met | Leu | Thr | Leu 80 |
| Pro | Leu | Ser | Pro | Pro 85 | Ser | Arg | Lys | Met | Ala 90 | Thr | Asn | Phe | Leu | Ala 95 | His |
| 31u | Lys | Ile | Trp 100 | Phe | Asp | Lys | Phe | Lys 105 | Tyr | Asp | Asp | Ala | Glu 110 | Arg | Arg |
| Phe | Tyr | Glu 115 | Gln | Met | Asn | Gly | Pro 120 | Val | Ala | Gly | Ala | Ser 125 | Arg | Gln | Glu |
| Asn | Gly 130 | Ala | Ser | Val | Ile | Leu 135 | Arg | Asp | Ile | Ala | Arg 140 | Ala | Arg | Glu | Asn |
| Ile 145 | Gln | Lys | Ser | Leu | Ala 150 | Gly | Ser | Ser | Gly | Pro 155 | Gly | Ala | Ser | Ser | Gly 160 |
| Chr | Ser | Gly | Asp | His 165 | Gly | Glu | Leu | Val | Val 170 | Arg | Ile | Ala | Ser | Leu 175 | Glu |
| Val | Glu | Asn | Gln 180 | Ser | Leu | Arg | Gly | Val 185 | Val | Gln | Glu | Leu | Gln 190 | Gln | Ala |
| (le | Ser | Lys 195 | Leu | Glu | Ala | Arg | Leu 200 | Asn | Val | Leu | Glu | Lys 205 | Ser | Ser | Pro |
| Sly | His 210 | Arg | Ala | Thr | Ala | Pro 215 | Gln | Thr | Gln | His | Val 220 | Ser | Pro | Met | Arg |
| 31n 225 | Val | Glu | Pro | Pro | Ala 230 | Lys | Lys | Pro | Ala | Thr 235 | Pro | Ala | Glu | Asp | Asp 240 |

Glu Asp Asp Asp Ile Asp Leu Phe Gly Ser Asp Asn Glu Glu Glu Asp
245 250 255

Lys Glu Ala Ala Gln Leu Arg Glu Glu Arg Leu Arg Xaa Tyr Ala Glu 260 265 270

Lys Lys Ala Lys Lys Xaa Ala Leu Val Ala Lys Ser Ser Ile Leu Leu 275 280 285

Asp Phe Lys Pro Trp Gly 290

<210> 596

<211> 134

<212> PRT

<213> Homo sapiens

<400> 596

Val Ser Arg Leu Gly Leu Leu Thr Pro Leu Gly Cys Ser Phe Gly Thr
1 5 10 15

Asp Glu Trp Leu Cys Pro Val Thr Ala Leu Ser Leu Pro Gly Gly Tyr
20 25 30

Val His Ser Arg Pro Leu Pro Arg Leu Arg Pro Met Arg Tyr Gly Asp 35 40 45

Thr Leu Ala Pro Arg Ser Trp Arg His Arg Pro Leu Pro Trp His Ser 50 55 60

Ser Phe Ala Gly Asp Pro Pro Leu Pro Lys Ala Leu Ser Pro Cys Ser 65 70 75 80

His Ser Arg Arg Thr Ala Ala Arg Ala Ser Gly Ser Leu Ala Thr Gly 85 90 95

Phe Glu Arg Leu His Ser Trp Gly Leu Glu Gly Gly Val Pro Lys Ala 100 105 110

Leu Ser Lys Ser Gln Ser Ser Ser His Gln Ser Leu Tyr Lys Val Leu 115 120 125

Gly Pro Glu Ala Leu Pro 130 <211> 91

<212> PRT

<213> Homo sapiens

<400> 597

Glu Gly Pro Glu Gly Ala Asn Leu Phe Ile Tyr His Leu Pro Gln Glu
1 5 10 15

Phe Gly Asp Gln Asp Ile Leu Gln Met Phe Met Pro Phe Gly Asn Val 20 25 30

Ile Ser Ala Lys Val Phe Ile Asp Lys Gln Thr Asn Leu Ser Lys Cys
35 40 45

Phe Gly Phe Val Ser Tyr Asp Asn Pro Val Ser Ala Gln Ala Ala Ile 50 55 60

Gln Ala Met Asn Gly Phe Gln Ile Gly Met Lys Arg Leu Lys Val Gln 65 70 75 80

Leu Lys Arg Ser Lys Asn Asp Ser Lys Pro Tyr

<210> 598

<211> 68

<212> PRT

<213> Homo sapiens

<400> 598

Arg Pro Thr Arg Pro Glu Lys Val Gly Ser Gly Gly Ser Ser Val Gly
1 5 10 15

Ser Gly Asp Ala Ser Ser Ser Arg His His His Arg Arg Arg Phe
20 25 30

His Leu Pro Gln Gln Pro Leu Leu Gln Arg Glu Val Trp Cys Val Gly 35 40 45

Thr Thr Gly Asn Ala Asn Gln Ala Gln Ser Ser Thr Glu Gln Thr Leu 50 55 60

Leu Lys Pro Lys

<210> 599

<211> 119

<212> PRT

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<213> Homo sapiens
<220>
<221> SITE
<222> (58)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (68)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (88)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (98)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (99)
<223> Xaa equals any of the naturally occurring L-amino acids
<400> 599
Phe Gly Arg Asp Gln Val Tyr Leu Ser Tyr Asn Asn Val Ser Ser Leu
                  5
                                     10
Lys Met Leu Val Ala Lys Asp Asn Trp Val Leu Ser Ser Glu Ile Ser
                                 25
Gln Val Arg Leu Tyr Thr Leu Glu Asp Asp Lys Phe Leu Ser Phe His
         35
                             40
                                                  45
Met Glu Met Val Val His Val Asp Ala Xaa Gln Ala Phe Leu Leu
                                             60
Ser Asp Leu Xaa Gln Arg Pro Glu Trp Asp Lys His Tyr Arg Ser Val
                                         75
Glu Leu Val Gln Gln Val Asp Xaa Gly Arg Arg His Leu Pro Arg His
                 85
                                     90
Gln Xaa Xaa Pro Arg Arg Ser His Lys Ala Pro Gly Leu Arg Asp Pro
                                105
                                                    110
Gly Leu Glu Ala Glu Ala Leu
        115
```

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<210> 600
<211> 177
<212> PRT
<213> Homo sapiens
<220>
<221> SITE
<222> (1)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (8)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (69)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (135)
<223> Xaa equals any of the naturally occurring L-amino acids
<400> 600
Xaa Glu Arg Leu Arg Ala Gln Xaa Glu Lys Ser Arg Asp Ser Gln Pro
Arg Leu Pro Leu Arg Phe Pro Ser Trp Arg Gly Pro Trp Cys Gly Ile
             20
                                 25
Glu Ile Ala Gly Tyr Gly Ala Glu Val Phe Arg Gln Tyr Trp Asp Ile
Pro Asp Gly Thr Asp Cys His Arg Lys Ala Tyr Ser Thr Thr Ser Ile
                         55
Ala Ser Val Ala Xaa Leu Thr Ala Ala Ala Tyr Arg Val Thr Leu Asn
 65
                     70
                                         75
Pro Pro Gly Thr Phe Leu Glu Gly Val Ala Lys Val Gly Gln Tyr Thr
Phe Thr Ala Ala Ala Val Gly Ala Val Phe Gly Leu Thr Thr Cys Ile
            100
                                105
Ser Ala His Val Arg Glu Lys Pro Asp Asp Pro Leu Asn Tyr Phe Leu
```

558

115 120 125

Gly Gly Cys Ala Gly Gly Xaa Thr Leu Gly Ala Arg Thr His Asn Tyr 130 140

Gly Ile Gly Ala Ala Ala Cys Val Tyr Phe Gly Ile Ala Ala Ser Leu 145 150 155 160

Val Lys Met Gly Arg Leu Glu Gly Trp Glu Val Phe Ala Lys Pro Lys 165 170 175

Val

<210> 601

<211> 218

<212> PRT

<213> Homo sapiens

<400> 601

Arg Gly Gly Gly Gly Ala Ser Ser Cys Cys Cys Cys Ala Pro Ser 1 5 10 15

Pro Arg Gly Arg Pro Val Pro Ala Arg Thr Pro Arg Arg Cys Pro Arg 20 25 30

Pro Ser Pro Gly Pro Ala Met Gly Leu Thr Val Ser Ala Leu Phe Ser 35 40 45

Arg Ile Phe Gly Lys Lys Gln Met Arg Ile Leu Met Val Gly Leu Asp 50 . 55 60

Ala Ala Gly Lys Thr Thr Ile Leu Tyr Lys Leu Lys Leu Gly Glu Ile
65 70 75 80

Val Thr Thr Ile Pro Thr Ile Gly Phe Asn Val Glu Thr Val Glu Tyr 85 90 95

Lys Asn Ile Cys Phe Thr Val Trp Asp Val Gly Gln Asp Lys Ile 100 105 110

Arg Pro Leu Trp Arg His Tyr Phe Gln Asn Thr Gln Gly Leu Ile Phe 115 120 125

Val Val Asp Ser Asn Asp Arg Glu Arg Val Gln Glu Ser Ala Asp Glu 130 135 140

Leu Gln Lys Met Leu Gln Glu Asp Glu Leu Arg Asp Ala Val Leu Leu 145 150 155 160

Val Phe Ala Asn Lys Gln Asp Met Pro Asn Ala Met Pro Val Ser Glu 165 170 175

Leu Thr Asp Lys Leu Gly Leu Gln His Leu Arg Ser Arg Thr Trp Tyr 180 185 190

Val Gln Ala Thr Cys Ala Thr Gln Gly Thr Gly Leu Tyr Asp Gly Leu 195 200 205

Asp Trp Leu Ser His Glu Leu Ser Lys Arg 210 215

<210> 602

<211> 829

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (32)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (454)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 602

Pro Gly Gln Ala Gly Ala Glu Gly His Val Arg Cys Cys Pro Gly Glu
1 5 10 15

Glu Gln Lys Ala Gly Gly Glu Arg Arg Cys Pro Gly Pro Gln Arg Xaa
20 25 30

Gly Ala Ala Leu Gly Pro Gly Pro Gly Glu Ala Arg Leu Asp Tyr Ser 35 40 45

Glu Phe Phe Thr Glu Asp Val Gly Gln Leu Pro Gly Leu Thr Ile Trp 50 55 60

Gln Ile Glu Asn Phe Val Pro Val Leu Val Glu Glu Ala Phe His Gly 65 70 75 80

Lys Phe Tyr Glu Ala Asp Cys Tyr Ile Val Leu Lys Thr Phe Leu Asp 85 90 95

Asp Ser Gly Ser Leu Asn Trp Glu Ile Tyr Tyr Trp Ile Gly Glu 100 105 110

| Ala | Thr | Leu 115 | Asp | Lys | Lys | Ala | Cys 120 | Ser | Ala | Ile | His | Ala 125 | Val | Asn | Leu |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Arg | Asn 130 | туг | Leu | Gly | Ala | Glu 135 | Суѕ | Arg | Thr | Val | Arg 140 | Glu | Glu | Met | Gly |
| Asp 145 | Glu | Ser | Glu | Glu | Phe 150 | Leu | Gln | Val | Phe | Asp 155 | Asn | Asp | Ile | Ser | Туг 160 |
| Ile | Glu | Gly | Gly | Thr 165 | Ala | Ser | Gly | Phe | Tyr 170 | Thr | Val | Glu | Asp | Thr 175 | His |
| Tyr | Val | Thr | Arg 180 | Met | Туr | Arg | Val | Tyr 185 | Gly | Lys | Lys | Asn | Ile 190 | Lys | Leu |
| Glu | Pro | Val 195 | Pro | Leu | Lys | Gly | Thr 200 | Ser | Leu | Asp | Pro | Arg 205 | Phe | Val | Ph∈ |
| Leu | Leu 210 | Asp | Arg | Gly | Leu | Asp 215 | Ile | Tyr | Val | Trp | Arg 220 | Gly | Ala | Gln | Ala |
| Thr 225 | Leu | Ser | Ser | Thr | Thr 230 | Lys | Ala | Arg | Leu | Phe 235 | Ala | Glu | Lys | Ile | Asr 240 |
| Lys | Asn | Glu | Arg | Lys 245 | Gly | Lys | Ala | Glu | Ile 250 | Thr | Leu | Leu | Val | Gln 255 | Gly |
| Gln | Glu | Leu | Pro 260 | Glu | Phe | Trp | Glu | Ala 265 | Leu | Gly | Gly | Glu | Pro 270 | Ser | Glu |
| Ile | Lys | Lys 275 | His | Val | Pro | Glu | Asp 280 | Phe | Trp | Pro | Pro | Gln 285 | Pro | Lys | Leu |
| Tyr | Lys 290 | Val | Gly | Leu | Gly | Leu 295 | Gly | Tyr | Leu | Glu | Leu 300 | Pro | Gln | Ile | Asr |
| Tyr 305 | Lys | Leu | Ser | Val | Glu 310 | His | Lys | Gln | Arg | Pro 315 | Lys | Val | Glu | Leu | Met 320 |
| Pro | Arg | Met | Arg | Leu 325 | Leu | Gln | Ser | Leu | Leu 330 | Asp | Thr | Arg | Cys | Val 335 | Asr |
| Ile | Leu | Asp | Cys 340 | Trp | Ser | Asp | Val | Phe 345 | Ile | Trp | Leu | Gly | Arg 350 | Lys | Ser |
| Pro | Arg | Leu 355 | Val | Arg | Ala | Ala | Ala 360 | Leu | Lys | Leu | Gly | Gln 365 | Glu | Leu | Cys |
| Gly | Met | | His | Arg | | Arg | | Ala | Thr | Val | Ser | Arg | Ser | Leu | Glu |

| Gly 385 | Thr | Glu | Ala | Gln | Val 390 | Phe | Lys | Ala | Lys | Phe 395 | Lys | Asn | Trp | Asp | 400 |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Val | Leu | Thr | Val | Asp 405 | Туr | Thr | Arg | Asn | Ala 410 | Glu | Ala | Val | Leu | Gln 415 | Ser |
| Pro | Gly | Leu | Ser 420 | Gly | Lys | Val | Lys | Arg 425 | Asp | Ala | Glu | Lys | Lys 430 | Asp | Glr |
| Met | Lys | Ala 435 | Asp | Leu | Thr | Ala | Leu 440 | Phe | Leu | Pro | Arg | Gln 445 | Pro | Pro | Met |
| Ser | Leu 450 | Ala | Glu | Ala | Xaa | Gln 455 | Leu | Met | Glu | Glu | Trp 460 | Asn | Glu | Asp | Let |
| Asp 465 | - | Met | Glu | Gly | Phe 470 | Val | Leu | Glu | Gly | Lys 475 | Lys | Phe | Ala | Arg | Leu 480 |
| Pro | Glu | Glu | Glu | Phe 485 | Gly | His | Phe | туr | Thr 490 | Gln | Asp | Cys | Tyr | Val 495 | Phe |
| Leu | Cys | Arg | Туг 500 | Trp | Val | Pro | Val | Glu 505 | туг | Glu | :Glu | Glu | Glu 510 | Lys | Lys |
| Glu | Asp | Lys 515 | Glu | Glu | Lys | Ala | Glu 520 | Gly | Lys | Glu | Gly | Glu 525 | Glu | Ala | Thr |
| Ala | Glu 530 | Ala | Glu | Glu | Lys | Gln 535 | Pro | Glu | Glu | Asp | Phe 540 | Gln | Cys | Ile | Val |
| Tyr 545 | Phe | Trp | Gln | Gly | Arg 550 | Glu | Ala | Ser | Asn | Met 555 | Gly | Trp | Leu | Thr | Phe 560 |
| Thr | Phe | Ser | Leu | Gln 565 | Lys | Lys | Phe | Glu | Ser 570 | Leu | Phe | Pro | Gly | Lys 575 | Leu |
| Glu | Val | Val | Arg 580 | Met | Thr | Gln | Gln | Gln 585 | Glu | Asn | Pro | Lys | Phe 590 | Leu | Ser |
| His | Phe | Lys 595 | Arg | Lys | Phe | Ile | 11e 600 | His | Arg | Gly | Lys | Arg 605 | Lys | Ala | Va] |
| Gln | Gly 610 | Ala | Gln | Gln | Pro | Ser 615 | Leu | Tyr | Gln | Ile | Arg 620 | Thr | Asn | Gly | Ser |
| Ala 625 | Leu | Cys | Thr | Arg | Cys 630 | Ile | Gln | Ile | Asn | Thr 635 | Asp | Ser | Ser | Leu | Leu 640 |
| Asn | Ser | Glu | Phe | Cys 645 | Phe | Ile | Leu | Lys | Val 650 | Pro | Phe | Glu | Ser | Glu 655 | Asp |

| Asn | Gln | Gly | 11e 660 | Val | туr | Ala | Trp | Val 665 | Gly | Arg | Ala | Ser | Asp 670 | Pro | Asp |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-------------|------------|------------|------------|
| Glu | Ala | Lys 675 | Leu | Ala | Glu | Asp | Ile 680 | Leu | Asn | Thr | Met | Phe 685 | Asp | Thr | Ser |
| Tyr | Ser 690 | Lys | Gln | Val | Ile | Asn 695 | Glu | Gly | Glu | Glu | Pro 700 | Glu | Asn | Phe | Phe |
| Trp 705 | Val | Gly | Ile | Gly | Ala 710 | Gln | Lys | Pro | Tyr | Asp 715 | Asp | Asp | Ala | Glu | Tyr 720 |
| Met | Lys | His | Thr | Arg 725 | Leų | Phe | Arg | Cys | Ser 730 | Asn | Glu | Lys | Gly | туг 735 | Phe |
| Ala | Val | Thr | Glu 740 | Lys | Cys | Ser | Asp | Phe 745 | Cys | Gln | Asp | Asp | Leu 750 | Ala | Asp |
| Asp | Asp | Ile 755 | Met | Leu | Leu | Asp | Asn 760 | Gly | Gln | Glu | Val | Tyr 765. | | тrр | Val |
| Gly | Thr 770 | Gln | Thr | Ser | Gln | Val 775 | Glu | Ile | Lys | Leu | Ser 780 | Leu | Lys | Ala | Cys |
| Gln 785 | Val | Tyr | Ile | Gln | His 790 | Met | Arg | Ser | Lys | Glu 795 | His | Glu | Arg | Pro | Arg 800 |
| Arg | Leu | Arg | Leu | Val 805 | Arg | Lys | Gly | Asn | Glu 810 | Gln | His | Ala | Phe | Thr 815 | Arg |
| Cys | Phe | His | Ala 820 | Trp | Ser | Ala | Phe | Cys 825 | Lys | Ala | Leu | Ala | | | |

<210> 603

<211> 221

<212> PRT

<213> Homo sapiens

<400> 603

Thr Glu Pro Pro Leu Ser Cys Cys Leu Pro Ala Thr Tyr Pro Ala Asp 10

Met Gly Thr Ala Gly Ala Met Gln Leu Cys Trp Val Ile Leu Gly Phe 20 25

Leu Leu Phe Arg Gly His Asn Ser Gln Pro Thr Met Thr Gln Thr Ser 35 40

Ser Ser Gln Gly Gly Leu Gly Leu Ser Leu Thr Thr Glu Pro Val Ser Ser Asn Pro Gly Tyr Ile Pro Ser Ser Glu Ala Asn Arg Pro Ser His Leu Ser Ser Thr Gly Thr Pro Gly Ala Gly Val Pro Ser Ser Gly Arg Asp Gly Gly Thr Ser Arg Asp Thr Phe Gln Thr Val Pro Pro Asn Ser Thr Thr Met Ser Leu Ser Met Arg Glu Asp Ala Thr Ile Leu Pro 120 Ser Pro Thr Ser Glu Thr Val Leu Thr Val Ala Ala Phe Gly Val Ile 130 135 Ser Phe Ile Val Ile Leu Val Val Val Ile Ile Leu Val Gly Val Val Ser Leu Arg Phe Lys Cys Arg Lys Ser Lys Glu Ser Glu Asp Pro 165 170 Gln Lys Pro Gly Ser Ser Gly Leu Ser Glu Ser Cys Ser Thr Ala Asn Gly Glu Lys Asp Ser Ile Thr Leu Ile Ser Met Lys Asn Ile Asn Met 200 Asn Asn Gly Lys Gln Ser Leu Ser Ala Glu Lys Val Leu 210 215 <210> 604

<211> 97

<212> PRT

<213> Homo sapiens

<400> 604

Ser Cys Gly Leu Ser Leu Ile Lys Met Thr Thr Ser Gln Lys His Arg
1 5 10 15

Asp Phe Val Ala Glu Pro Met Gly Glu Lys Pro Val Gly Ser Leu Ala
20 25 30

Gly Ile Gly Glu Val Leu Gly Lys Lys Leu Glu Glu Arg Gly Phe Asp 35 40 45

Lys Ala Tyr Val Val Leu Gly Gln Phe Leu Val Leu Lys Lys Asp Glu

50 55 60 Asp Leu Phe Arg Glu Trp Leu Lys Asp Thr Cys Gly Ala Asn Ala Lys Gln Ser Arg Asp Cys Phe Gly Cys Leu Arg Glu Trp Cys Asp Ala Phe 85 90 Leu <210> 605 <211> 266 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (84) <223> Xaa equals any of the naturally occurring L-amino acids Gly Pro Arg Arg Leu Gly Ala Leu His Ala Ala Ala Thr Gly Ala Arg 10 Cys Leu Val Glu Leu Leu Val Ala His Gly Ala Asp Leu Asn Ala Lys 25 Ser Leu Met Asp Glu Thr Pro Leu Asp Val Cys Gly Asp Glu Glu Val 40 45 Arg Ala Lys Leu Leu Glu Leu Lys His Lys His Asp Ala Leu Leu Arg Ala Gln Ser Arg Gln Arg Ser Leu Leu Arg Arg Arg Thr Ser Ser Ala 75 Gly Ser Arg Xaa Lys Val Val Arg Arg Val Ser Leu Thr Gln Arg Thr Asp Leu Tyr Arg Lys Gln His Ala Gln Glu Ala Ile Val Trp Gln Gln

105

Pro Pro Pro Thr Ser Pro Glu Pro Pro Glu Asp Asn Asp Asp Gln
115 120 125

Thr Gly Ala Glu Leu Arg Pro Pro Pro Pro Glu Glu Asp Asn Pro Glu

565

Val Val Arg Pro His Asn Gly Arg Val Gly Gly Ser Pro Val Arg His 155 Leu Tyr Ser Lys Arg Leu Asp Arg Ser Val Ser Tyr Gln Leu Ser Pro 165 170 Leu Asp Ser Thr Thr Pro His Thr Leu Val His Asp Lys Ala His His Thr Leu Ala Asp Leu Lys Arg Gln Arg Ala Ala Ala Lys Leu Gln Arg 200 Pro Pro Pro Glu Gly Pro Glu Ser Pro Glu Thr Ala Glu Pro Gly Leu 215 Pro Gly Asp Thr Val Thr Pro Gln Pro Asp Cys Gly Phe Arg Ala Gly 230 235 Gly Asp Pro Pro Leu Leu Lys Leu Thr Ala Pro Ala Val Glu Ala Pro 250 Val Glu Arg Arg Pro Cys Cys Leu Leu Met 260 265

<210> 606

<211> 331

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (91)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (285)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 606

His Asp Ser Cys Phe Val Glu Met Gln Ala Gln Lys Val Met His Val 1 5 10 15

Ser Ser Ala Glu Leu Asn Tyr Ser Leu Pro Tyr Asp Ser Lys His Gln 20 25 30

Ile Arg Asn Ala Ser Asn Val Lys His His Asp Ser Ser Ala Leu Gly
35 40 45

| Val | Tyr 50 | Ser | Tyr | Ile | Pro | Leu 55 | Val | Glu | Asn | Pro | Tyr 60 | Phe | Ser | Ser | Tr |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|---------------------|------------|------------|------------|
| Pro 65 | Pro | Ser | Gly | Thr | Ser 70 | Ser | Lys | Met | Ser | Leu 75 | Asp | Leu | Pro | Glu | Lys 80 |
| Gln | Asp | Gly | Thr | Val 85 | Phe | Pro | Ser | Ser | Leu 90 | Xaa | Pro | Thr | Ser | Ser 95 | Thi |
| Ser | Leu | Phe | Ser 100 | Tyr | Tyr | Asn | Ser | His 105 | Asp | Ser | Leu | Ser | Leu 110 | Asn | Sei |
| Pro | Thr | Asn 115 | Ile | Ser | Ser | Leu | Leu 120 | Asn | Gln | Glu | Ser | Ala 125 | Val | Leu | Ala |
| Thr | Ala 130 | Pro | Arg | Ile | Asp | Asp 135 | Glu | Ile | Pro | Pro | Pro 140 | Leu | Pro | Val | Arg |
| Thr 145 | Pro | Glu | Ser | Phe | Ile 150 | Val | Val | Glu | Glu | Ala 155 | Gly | Glu | Phe | Ser | Pro |
| Asn | Val | Pro | Lys | Ser 165 | Leu | Ser | Ser | Ala | Val 170 | Lys | Val | Lys | Ile | Gly 175 | Thi |
| Ser | Leu | Glu | Trp 180 | Gly | Gly | Thr | Ser | Glu 185 | Pro | Lys | Lys | Phe | Asp 190 | Asp | Sei |
| Val | Ile | Leu 195 | Arg | Pro | Ser | Lys | Ser 200 | Val | Lys | Leu | Arg | Ser 2 0 5 | Pro | Lys | Ser |
| Glu | Leu 210 | His | Gln | Asp | Arg | Ser 215 | Ser | Pro | Pro | Pro | Pro 220 | Leu | Pro | Glu | Arg |
| Thr 225 | Leu | Glu | Ser | Phe | Phe 230 | Leu | Ala | Asp | Glu | Asp 235 | Cys | Met | Gln | Ala | Glr 240 |
| Ser | Ile | Glu | Thr | Туг 245 | Ser | Thr | Ser | Tyr | Pro 250 | Asp | Thr | Met | Glu | Asn 255 | Sei |
| Thr | Ser | Ser | Lys 260 | Gln | Thr | Leu | Lys | Thr 265 | Pro | Gly | Lys | Ser | Phe 270 | Thr | Arç |
| Ser | Lys | Ser 275 | Leu | Lys | Ile | Leu | Arg 280 | Asn | Met | Lys | Lys | Xaa 285 | Ile | Cys | Asr |
| | 290 | | | | | 295 | Ala | | | | 300 | | | | |
| Ser 305 | Ser | Phe | Leu | Asn | Phe 310 | Gly | Phe | Ala | Asn | Arg 315 | Phe | Ser | Lys | Pro | Lys 320 |

Gly Pro Arg Asn Pro Pro Pro Thr Trp Asn Ile 325 330

<210> 607 <211> 192 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (78) <223> Xaa equals any of the naturally occurring L-amino acids <400> 607 Ala Ala Pro Ser Glu Pro Lys Ala Arg Gly Gly His Gly Gly Ala Leu 10 Ala Arg Leu Glu Thr Met Pro Lys Leu Gln Gly Phe Glu Phe Trp Ser 20 25 Arg Thr Leu Arg Gly Ala Arg His Val Val Ala Pro Met Val Asp Gln Ser Glu Leu Ala Trp Arg Leu Leu Ser Arg Arg His Gly Ala Gln Leu 55 Cys Tyr Thr Pro Met Leu His Ala Gln Val Phe Val Arg Xaa Ala Asn 65 Tyr Arg Lys Glu Asn Leu Tyr Cys Glu Val Cys Pro Glu Asp Arg Pro Leu Ile Val Gln Phe Cys Ala Asn Asp Pro Glu Val Phe Val Gln Ala 105 Ala Leu Leu Ala Gln Asp Tyr Cys Asp Ala Ile Asp Leu Asn Leu Gly 115 120 Cys Pro Gln Met Ile Ala Lys Arg Gly His Tyr Gly Ala Phe Leu Gln Asp Glu Trp Asp Leu Leu Gln Arg Met Ile Leu Leu Ala His Glu Lys 145 150 155 Leu Ser Val Pro Val Thr Cys Lys Ile Arg Val Phe Pro Glu Ile Asp 170

Lys Thr Val Ser Thr Pro Arg Cys Trp Arg Pro Ala Ala Ser Cys 180 185 190

| | 0> 6 | | | | | | | | | | | | | | |
|------|------|-------|------|-------|-------|------|------|-----|-------|------|-----|------|-----|-----------|-------|
| | 1> 4 | | | | | | | | | | | | | | |
| <21 | 2> P | RT | | | | | | • | | | | | | | |
| <21 | 3> H | OMO | sapi | ens | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| <40 | 0> 6 | 80 | | | | | | | | | | | | | |
| His | Ile | Lys | Cys | Pro | His | Ser | Lys | Tyr | Gly | ·Cys | Thr | Phe | Ile | Gly | Asn |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| | | | | | | | | | | | | | | | |
| Gln | Asp | Thr | Tyr | Glu | Thr | His | Leu | Glu | Thr | Cys | Arg | Phe | Glu | Gly | Leu |
| | - | | 20 | | | | | 25 | | • | , | | 30 | • | |
| | | | | | | | | | | | | | | | |
| Lvs | Glu | Phe | Leu | Gln | Gln | Thr | Asp | Asp | Ara | Phe | His | Glu | Met | His | Val |
| -1- | | 35 | | | | | 40 | | , | • | | 45 | | | |
| | | ,,, | | | | | 40 | | | | | 43 | | | |
| Δla | Len | A 3 a | Gla | Tue | Acn | Cl n | C1., | Tla | A 1 - | Dho | Lon | 1-0 | 50- | Work | T 011 |
| nia | | ALG | GIII | гÀг | Asp | | GIU | 116 | HIG | Pne | | Arg | ser | met | Leu |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| | _ | _ | _ | | _ | | | | _ | | | _ | | | _ |
| | Lys | Leu | Ser | Glu | Lys | He | Asp | GIn | Leu | | Lys | Ser | Leu | Glu | |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| | | | | | | | | | | | | | | | |
| Lys | Phe | Asp | Val | Leu | Asp | Glu | Asn | Gln | Ser | Lys | Leu | Ser | Glu | Asp | Leu |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| | | | | | | | | | | | | | | | |
| Met | Glu | Phe | Arg | Arg | Asp | Ala | Ser | Met | Leu | Asn | Asp | Glu | Leu | Ser | His |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| | | | | | | | | | | | | | | | |
| Ile | Asn | Ala | Arg | Leu | Asn | Met | Gly | Ile | Leu | Gly | Ser | Tyr | Asp | Pro | Gln |
| | | 115 | • | | | | 120 | | | • | | 125 | | | |
| | | | | | | | | | | | | | | | |
| Gln | Tle | Phe | Lvs | Cvs | Lys | Glv | Thr | Phe | Va 1 | ឲាម | His | Gla | Glv | Pro | Va 1 |
| | 130 | | -10 | -10 | -,- | 135 | | | *** | 01, | 140 | 0111 | OLY | 110 | vul |
| | 130 | | | | | 133 | | | | | 140 | | | | |
| Trn. | Cuc | Tou | Cvic | U a I | There | C0 | Wok | C1 | | * | * | n | C | ~1 | C |
| | cys | pea | cys | val | Tyr | ser | met | GIY | Asp | | Leu | Pne | ser | GIY | |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| | | | | | | | | | | | | | | | |
| Ser | Asp | Lys | Thr | | Lys | Val | Trp | Asp | Thr | Cys | Thr | Thr | Tyr | Lys | Cys |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| | | | | | | | | | | | | | | | |
| Gln | Lys | Thr | Leu | Glu | Gly | His | Asp | Gly | Ile | Val | Leu | Ala | Leu | Cys | Ile |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| | | | | | | | | | | | | | | | |
| Gln | Gly | Cys | Lys | Leu | Tyr | Ser | Gly | Ser | Ala | Asp | Cys | Thr | Ile | Ile | Val |
| | _ | 195 | _ | | - | | 200 | | | - | - | 205 | | | |

569

Trp Asp Ile Gln Asn Leu Gln Lys Val Asn Thr Ile Arg Ala His Asp Asn Pro Val Cys Thr Leu Val Ser Ser His Asn Val Leu Phe Ser Gly 230 235 Ser Leu Lys Ala Ile Lys Val Trp Asp Ile Val Gly Thr Glu Leu Lys 245 250 Leu Lys Lys Glu Leu Thr Gly Leu Asn His Trp Val Arg Ala Leu Val 260 265 Ala Ala Gln Ser Tyr Leu Tyr Ser Gly Ser Tyr Gln Thr Ile Lys Ile 280 Trp Asp Ile Arg Thr Leu Asp Cys Ile His Val Leu Gln Thr Ser Gly 290 295 300 Gly Ser Val Tyr Ser Ile Ala Val Thr Asn His His Ile Val Cys Gly 310 315 Thr Tyr Glu Asn Leu Ile His Val Trp Asp Ile Glu Ser Lys Glu Gln 325 330 335 Val Arg Thr Leu Thr Gly His Val Gly Thr Val Tyr Ala Leu Ala Val 345 Ile Ser Thr Pro Asp Gln Thr Lys Val Phe Ser Ala Ser Tyr Asp Arg 360 Ser Leu Arg Val Trp Ser Met Asp Asn Met Ile Cys Thr Gln Thr Leu 370 375 Leu Arg His Gln Gly Ser Val Thr Ala Leu Ala Val Ser Arg Gly Arg 390 395 Leu Phe Ser Gly Ala Val Asp Ser Thr Val Lys Val Trp Thr Cys

<210> 609

<211> 48

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (27)

<223> Xaa equals any of the naturally occurring L-amino acids

<210> 610

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<211> 241
<212> PRT
<213> Homo sapiens
<220>
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<222> (1)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (3)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
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<222> (7)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
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<222> (13)
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<220>
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<222> (37)
<223> Xaa equals any of the naturally occurring L-amino acids
<400> 610
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| Xaa 1 | Asp | Xaa | Gly | Arg 5 | Pro | Xaa | Arg | Thr | Ala 10 | Glu | Ser | Xaa | Phe | Gly 15 | Ile |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Asn | Leu | Lys | Gly 20 | Pro | Lys | Ile | Lys | Gly 25 | Gly | Ala | Asp | Val | Ser 30 | Gly | Gly |
| Val | Ser | Ala 35 | Pro | Xaa | Ile | Ser | Leu 40 | Gly | Glu | Gly | His | Leu 45 | Ser | Val | Lys |
| Gly | Ser 50 | Gly | Gly | Glu | Trp | Lys 55 | Gly | Pro | Gln | Val | Ser 60 | Ser | Ala | Leu | Asn |
| Leu 65 | Asp | Thr | Ser | Lys | Phe 70 | Ala | Gly | Gly | Leu | His 75 | Phe | Ser | Gly | Pro | Lys 80 |
| Val | Glu | Gly | Gly | Val 85 | Lys | Gly | Gly | Gln | Ile 90 | Gly | Leu | Gln | Ala | Pro 95 | Gly |
| Leu | Ser | Val | Ser 100 | Gly | Pro | Gln | Gly | His 105 | Leu | Glu | Ser | Gly | Ser 110 | Gly | Lys |
| Val | Thr | Phe 115 | Pro | Lys | Met | Lys | 11e 120 | Pro | Lys | Phe | Thr | Phe 125 | Ser | Gly | Arg |
| Glu | Leu 130 | Val | Gly | Arg | Glu | Met 135 | Gly | Val | Asp | Val | His 140 | Phe | Pro | Lys | Ala |
| Glu 145 | Ala | Ser | Ile | Gln | Ala 150 | Gly | Ala | Gly | Asp | Gly 155 | Glu | Trp | Glu | Glu | Ser 160 |
| Glu | Val | Lys | Leu | Lys 165 | Lys | Ser | Lys | Ile | Lys 170 | Met | Pro | Lys | Phe | Asn 175 | Phe |
| Ser | Lys | Pro | Lys 180 | Gly | Lys | Gly | Gly | Val 185 | Thr | Gly | Ser | Pro | Glu 190 | Ala | Ser |
| Ile | Ser | Gly 195 | Ser | Lys | Gly | Asp | Leu 200 | Lys | Ser | Ser | Lys | Ala 205 | Ser | Leu | Gly |
| Ser | Leu 210 | Glu | Gly | Glu | Ala | Glu 215 | Ala | Glu | Ala | Ser | Ser 220 | Pro | Lys | Gly | Lys |
| Phe 225 | Ser | Leu | Phe | Lys | Ser 230 | Lys | Lys | Pro | Arg | His 235 | Arg | Cys | Lys | Phe | Ile 240 |
| Gln | | | | | | | | | | | | | | | |

WO 00/55173

572

<211> 77

<212> PRT

<213> Homo sapiens

<400> 611

His Tyr Arg Arg Tyr Ala Cys Arg Tyr Arg Ser Gly Ile Pro Gly Ser $1 \hspace{1cm} 5 \hspace{1cm} 10 \hspace{1cm} 15$

Thr His Ala Ser Gly Val Ala Asp Gly Gly Gln Val Phe Leu Phe Pro 20 25 30

Glu Thr Gly Ser Val Gln Thr Ala Asn Ala His Arg Trp Pro Arg Gly 35 40 45

Gly Gly Ser Gln Gly Val Trp Val Phe Leu Gly Phe Phe Ser Val Val 50 55 60

Ser Phe Thr Gln Gly Trp Trp Ser Gln Pro Val Trp Cys 65 70 75

<210> 612

<211> 137

<212> PRT

<213> Homo sapiens

<400> 612

Leu Gln Val Pro Val Arg Asn Ser Gly Ser Pro Thr Arg Gln Ala Ala 1 5 10 15

Ala Met Thr Phe Cys Arg Leu Leu Asn Arg Cys Gly Glu Ala Ala Arg 20 25 30

Ser Leu Pro Leu Gly Ala Arg Cys Phe Gly Val Arg Val Ser Pro Thr 35 40 45

Gly Glu Lys Val Thr His Thr Gly Gln Val Tyr Asp Asp Lys Asp Tyr 50 60

Arg Arg Ile Arg Phe Val Gly Arg Gln Lys Glu Val Asn Glu Asn Phe
65 70 75 80

Ala Ile Asp Leu Ile Ala Glu Gln Pro Val Ser Glu Val Glu Thr Arg 85 90 95

Val Ile Ala Cys Asp Gly Gly Gly Gly Ala Leu Gly His Pro Lys Val 100 105 110

Tyr Ile Asn Leu Asp Lys Glu Thr Lys Thr Gly Thr Cys Gly Tyr Cys 115 120 125 Gly Leu Gln Phe Arg Gln His His His

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130
<210> 613
<211> 122
<212> PRT
<213> Homo sapiens
<220>
<221> SITE
<222> (50)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (75)
<223> Xaa equals any of the naturally occurring L-amino acids
<22.0>
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<222> (80)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
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<222> (85)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (98)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (105)
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<220>
<221> SITE
<222> (111)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (116)
<223> Xaa equals any of the naturally occurring L-amino acids
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<400> 613

Tyr Ser Thr Asp Asn Asn Asn Trp Tyr Ser Ile Phe Tyr Leu His
1 5 10 15

Ser Ser Phe Leu Gly Glu Asn Ala Glu Lys Leu Leu Gln Phe Lys Arg 20 25 30

Trp Phe Trp Ser Ile Val Glu Lys Met Ser Met Thr Glu Arg Gln Asp
35 40 45

Leu Xaa Tyr Phe Trp Thr Ser Ser Pro Ser Leu Pro Ala Ser Glu Glu 50 55 60

Gly Phe Gln Pro Met Pro Ser Ile Thr Ile Xaa Pro Pro Asp Asp Xaa 65 70 75 80

His Leu Pro Thr Xaa Lys Tyr Leu His Phe Leu Asp Phe Thr Phe Pro 85 90 95

Leu Xaa Ser Phe Lys Gln Asp Ser Xaa Asn Arg Lys Leu Val Xaa Ser 100 105 110

Pro Phe Arg Xaa Gln Lys Phe Trp Val Leu 115 120

<210> 614

<211> 62

<212> PRT

<213> Homo sapiens

<400> 614

Phe Phe Ile Gly Leu Glu Thr Arg Ala Asn Ser Ile Met Phe Ser Lys
1 5 10 15

Glu Thr Asp Leu Ser Cys Trp Ile Arg Gly Thr Asn Pro Thr Tyr Met 20 25 30

Ile Phe Phe Leu Phe Leu Ser Cys Ser Tyr Gly Thr Val Leu Phe Gly
35 40 45

Thr Phe Ala Thr Arg Asp Asn Thr Thr Phe Leu Thr Leu Ile 50 60

<210> 615

<211> 159

<212> PRT

<213> Homo sapiens

<400> 615 Val Gly Leu Pro Asn Met Ala Gln Ser Ile Asn Ile Thr Glu Leu Asn Leu Pro Gln Leu Glu Met Leu Lys Asn Gln Leu Asp Gln Glu Val Glu 25 Phe Leu Ser Thr Ser Ile Ala Gln Leu Lys Val Val Gln Thr Lys Tyr 40 Val Glu Ala Lys Asp Cys Leu Asn Val Leu Asn Lys Ser Asn Glu Gly 55 Lys Glu Leu Leu Val Pro Leu Thr Ser Ser Met Tyr Val Pro Gly Lys 70 75 Leu His Asp Val Glu His Val Leu Ile Asp Val Gly Thr Gly Tyr Tyr 90 Val Glu Lys Thr Ala Glu Asp Ala Lys Asp Phe Phe Lys Arg Lys Ile 105 Asp Phe Leu Thr Lys Gln Met Glu Lys Ile Gln Pro Ala Leu Gln Glu 115 120 125 Lys His Ala Met Lys Gln Ala Val Met Glu Met Met Ser Gln Lys Ile Gln Gln Leu Thr Ala Leu Gly Ala Ala Gln Ala Thr Ala Lys Ala 150 155

<210> 616 <211> 93 <212> PRT <213> Homo sapiens

<220> <221> SITE

<222> (8)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 616

Lys Val Ala Cys Arg Tyr Arg Xaa Gly Ile Pro Gly Arg Pro Thr Arg

1 10 15

Pro Gly Thr Gln Asp Ala Glu Gly Lys Lys Ala Lys Gly Lys Lys Val 20 25 30 Ala Pro Ala Pro Ala Val Val Lys Lys Gln Glu Ala Lys Lys Val Val 35 40 45

Asn Pro Leu Phe Glu Lys Arg Pro Lys Asn Phe Gly Ile Gly Gln Asp 50 55

Ile Gln Pro Lys Arg Asp Leu Thr Arg Phe Val Lys Trp Pro Arg Tyr 65 70 75 80

Ile Arg Leu Gln Arg His Ala Arg Ser Ser Thr Ser Gly $85 \hspace{1cm} 90$

<210> 617

<211> 362

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (307)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 617

Ser Arg Val Asp Pro Arg Val Arg Arg Gly Val Pro Tyr Gln Leu Gly
1 5 10 15

Pro His Gly His Arg Gln Gly Leu Glu Ala Pro Leu Tyr Leu Thr Pro 20 25 30

Glu Gly Trp Ser Leu Phe Leu Gln Arg Tyr Tyr Gln Val Val His Glu
35 40 45

Gly Ala Glu Leu Arg His Leu Asp Thr Gln Val Gln Arg Cys Glu Asp 50 60

Ile Leu Gln Gln Leu Gln Ala Val Val Pro Gln Ile Asp Met Glu Gly 65 70 75 80

Asp Arg Asn Ile Trp Ile Val Lys Pro Gly Ala Lys Ser Arg Gly Arg 85 90 95

Gly Ile Met Cys Met Asp His Leu Glu Glu Met Leu Lys Leu Val Asn 100 105 110

Gly Asn Pro Val Val Met Lys Asp Gly Lys Trp Val Val Gln Lys Tyr
115 120 125

Ile Glu Arg Pro Leu Leu Ile Phe Gly Thr Lys Phe Asp Leu Arg Gln
130 135 140

WO 00/55173 PCT/US00/05881

Asp Ser Tyr Ile Arg Phe Ser Thr Gln Pro Phe Ser Leu Lys Asn Leu 165 170 Asp Asn Ser Val His Leu Cys Asn Asn Ser Ile Gln Lys His Leu Glu 185 Asn Ser Cys His Arg His Pro Leu Leu Pro Pro Asp Asn Met Trp Ser 195 200 Ser Gln Arg Phe Gln Ala His Leu Gln Glu Met Gly Ala Pro Asn Ala 215 Trp Ser Thr Ile Ile Val Pro Gly Met Lys Asp Ala Val Ile His Ala 230 235 Leu Gln Thr Ser Gln Asp Thr Val Gln Cys Arg Lys Ala Ser Phe Glu 245 250 Leu Tyr Gly Ala Asp Phe Val Phe Gly Glu Asp Phe Gln Pro Trp Leu 265 Ile Glu Ile Asn Ala Ser Pro Thr Met Ala Pro Ser Thr Ala Val Thr 280 Ala Arg Leu Cys Ala Gly Val Gln Ala Asp Thr Leu Arg Val Val Ile 295

Trp Phe Leu Val Thr Asp Trp Asn Pro Leu Thr Val Trp Phe Tyr Arg

150

Asp Arg Xaa Leu Asp Arg Asn Cys Asp Thr Gly Ala Phe Glu Leu Ile 305 310 315 320

Tyr Lys Gln Pro Ala Val Glu Val Pro Gln Tyr Val Gly Ile Arg Leu
325 330 335

Leu Val Glu Gly Phe Thr Ile Lys Lys Pro Met Ala Met Cys His Arg 340 345 350

Arg Met Gly Val Arg Gln Gln Ser Leu Cys 355 360

<210> 618

145

<211> 328

<212> PRT

<213> Homo sapiens

<400> 618

| Ile l | Arg | Met | Arg | Glu 5 | Trp | Trp | Val | Gln | Val 10 | Gly | Leu | Leu | Ala | Val 15 | Pro |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Leu | Leu | Ala | Ala 20 | туг | Leu | His | Ile | Pro 25 | Pro | Pro | Gln | Leu | Ser 30 | Pro | Ala |
| Leu | His | Ser 35 | Trp | Lys | Ser | Ser | Gly 40 | Lys | Phe | Phe | Thr | Tyr 45 | Lys | Gly | Leu |
| Arg | ·Ile 50 | Phe | туг | Gln | Asp | Ser 55 | Val | Gly | Val | Val | Gly 60 | Ser | Pro | Glu | Ile |
| Val 65 | Val | Leu | Leu | His | Gly 70 | Phe | Pro | Thr | Ser | Ser 75 | Tyr | Asp | Trp | туг | Lys 80 |
| Ile | Trp | Glu | Gly | Leu 85 | Thr | Leu | Arg | Phe | His 90 | Arg | Val | Ile | Ala | Leu 95 | Asp |
| Phe | Leu | Gly | Phe 100 | Gly | Phe | Ser | Asp | Lys 105 | Pro | Arg | Pro | His | His 110 | Tyr | Ser |
| Ile | Phe | Glu 115 | Gln | Ala | Ser | Ile | Val 120 | Glu | Ala | Leu | Leu | Arg 125 | His | Leu | Gly |
| Leu | Gln 130 | Ąsn | Arg | Arg | Ile | Asn 135 | Leu | Leu | Ser | His | Asp 140 | - | Gly | Asp | Ile |
| Val 145 | Ala | Gln | Glu | Leu | Leu 150 | Tyr | Arg | Tyr | Lys | Gln 155 | Asn | Arg | Ser | Gly | Arg 160 |
| Leu | Thr | Ile | Lys | Ser 165 | Leu | Cys | Leu | Ser | Asn 170 | Gly | Gly | Ile | Phe | Pro 175 | Glu |
| Thr | His | Arg | Pro 180 | Leu | Leu | Leu | Gln | Lys 185 | Leu | Leu | Lys | Asp | Gly 190 | Gly | Val |
| Leu | Ser | Pro 195 | Ile | Leu | Thr | Arg | Leu 200 | Met | Asn , | Phe | Phe | Val 205 | Phe | Ser | Arg |
| Gly | Leu 210 | Thr | Pro | Val | Phe | Gly 215 | Pro | Tyr | Thr | Arg | Pro 220 | Ser | Glu | Ser | Glu |
| Leu 225 | Trp | Asp | Met | Trp | Ala 230 | Gly | Ile | Arg | Asn | Asn 235 | Asp | Gly | Asn | Leu | Val 240 |
| Ile | Asp | Ser | Leu | Leu 245 | Gln | Tyr | Ile | Asn | Gln 250 | Arg | Lys | Lys | Phe | Arg 255 | Arg |
| Arg | Trp | Val | Gly 260 | Ala | Leu | Ala | Ser | Val 265 | Thr | Ile | Pro | Ile | His 270 | Phe | Ile |

Tyr Gly Pro Leu Asp Pro Val Asn Pro Tyr Pro Glu Phe Leu Glu Leu 275 280 285

Tyr Arg Lys Thr Leu Pro Arg Ser Thr Val Ser Ile Leu Asp Asp His 290 295 300

Ile Ser His Tyr Pro Gln Leu Glu Asp Pro Met Gly Phe Leu Asn Ala 305 310 315 320

Tyr Met Gly Phe Ile Asn Ser Phe 325

<210> 619

<211> 271

<212> PRT

<213> Homo sapiens

<400> 619

Asn Met Asp Pro Pro Gly Leu Gln Gly Val Gln Gly Thr Val Ala Ala 1 5 10 15

Cys Gly Ala Cys Tyr Trp Leu Leu Gly Leu Met Ala Val Arg Ala Ser 20 25 30

Phe Glu Asn Asn Cys Glu Ile Gly Cys Phe Ala Lys Leu Thr Asn Thr 35 40 45

Tyr Cys Leu Val Ala Ile Gly Gly Ser Glu Asn Phe Tyr Ser Val Phe 50 60

Glu Gly Glu Leu Ser Asp Thr Ile Pro Val Val His Ala Ser Ile Ala 65 70 75 80

Gly Cys Arg Ile Ile Gly Arg Met Cys Val Gly Asn Arg His Gly Leu 85 90 95

Leu Val Pro Asn Asn Thr Thr Asp Gln Glu Leu Gln His Ile Arg Asn 100 105 110

Ser Leu Pro Asp Thr Val Gln Ile Arg Arg Val Glu Glu Arg Leu Ser 115 120 125

Ala Leu Gly Asn Val Thr Thr Cys Asn Asp Tyr Val Ala Leu Val His 130 135 140

Val Glu Val Phe Arg Gln Thr Val Ala Asp Gln Val Leu Val Gly Ser

165 170 175

Tyr Cys Val Phe Ser Asn Gln Gly Gly Leu Val His Pro Lys Thr Ser 180 185 190

Ile Glu Asp Gln Asp Glu Leu Ser Ser Leu Leu Gln Val Pro Leu Val
195 200 205

Ala Gly Thr Val Asn Arg Gly Ser Glu Val Ile Ala Ala Gly Met Val 210 220

Val Asn Asp Trp Cys Ala Phe Cys Gly Leu Asp Thr Thr Ser Thr Glu 225 230 235 240

Leu Ser Val Val Glu Ser Val Phe Lys Leu Asn Glu Ala Gln Pro Ser 245 250 255

Thr Ile Ala Thr Ser Met Arg Asp Ser Leu Ile Asp Ser Leu Thr 260 265 270

<210> 620

<211> 88

<212> PRT

<213> Homo sapiens

<400> 620

Gly Ser Ala Ala Met Lys Val Lys Ile Lys Cys Trp Asn Gly Val Ala 1 5 10 15

Thr Trp Leu Trp Val Ala Asn Asp Glu Asn Cys Gly Ile Cys Arg Met 20 25 30

Ala Phe Asn Gly Cys Cys Pro Asp Cys Lys Val Pro Gly Asp Asp Cys 35 40 45

Pro Leu Val Trp Gly Gln Cys Ser His Cys Phe His Met His Cys Ile 50 55 60

Leu Lys Trp Leu His Ala Gln Gln Val Gln Gln His Cys Pro Met Cys
65 70 75 80

Arg Gln Glu Trp Lys Phe Lys Glu

85

<210> 621

<211> 46

<212> PRT

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<213> Homo sapiens
<220>
<221> SITE
<222> (35)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (41)
<223> Xaa equals any of the naturally occurring L-amino acids
Ala Gly Thr Ser Arg Ser Glu Gly Lys Arg Ser Ser Val Leu Thr Arg
Thr Glu Phe Gln Ile Glu Met Phe Gln Thr Ile Glu Gly Glu Lys Trp
                                 25
Pro Gly Xaa Ser Ile Asn Leu Ser Xaa Phe His Gly Cys Phe
         35
                             40
<210> 622
<211> 103
<212> PRT
<213> Homo sapiens
<220>
<221> SITE
<222> (35)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (36)
<223> Xaa equals any of the naturally occurring L-amino acids
<400> 622
Gly Arg Pro Thr Arg Pro Arg Gly Arg Gly Arg Ser Ser Ala Cys Leu
                                     10
Leu Leu Glu Gly Asp Gly Pro Ala Arg Leu Trp Ala Pro Thr Ser Pro
             20
Gly Val Xaa Xaa Glu Arg Phe Ala Glu Glu Arg Gly Ser Gly Arg Ala
Leu Asn Ala Gly Pro Lys His Pro Gly Ser Leu His Ser Pro Arg Pro
```

Gln Thr Leu Thr Lys Thr Trp Ile Cys Ser Arg Phe Ser Cys Ser Arg 65 70 75 80

Ser Ser Arg Ser Cys Pro Arg Leu Leu Arg Leu Arg Ala Glu Lys Lys 85 90 95

Val Cys Gln Ala Trp Thr Gln 100

<210> 623

<211> 103

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (60)

<223> Xaa equals any of the naturally occurring-L-amino acids

<400> 623

Gly Arg Pro Thr Arg Pro Thr Ser Ser Arg Ser Arg Ala Ala Arg Pro
1 5 10 15

Phe Phe Phe Phe Phe Phe Trp Phe Pro Glu Phe Gly Phe Ile Leu 20 25 30

Gln Tyr Arg Asn His Leu Glu Pro Ser Glu Thr Asp Ile Pro Glu Ala 35 40 45

Glu Ala Leu Ser Asn Gln Tyr Cys Val Ala Leu Xaa Pro Leu Arg Lys
50 55 60

Pro His Leu Gly Tyr Lys Arg Ser Phe Tyr Val Tyr Pro Leu Tyr His 65 70 75 80

Gly Phe Leu Ser Pro Leu Leu Leu Pro Ile Leu Pro Gly Glu Asn Thr
85 90 95

Ala Gln Arg Leu Pro Ser Glu 100

<210> 624

<211> 305

<212> PRT

<213> Homo sapiens

| <22 | 0> | | | | | | | | | | | | | | |
|----------------|-------|------|------------|-------|------|--------------|------|---------|------|------|-------------|------|------|-------------|-------|
| <22 | 1> S | ITE | | | | | | | | | | | | | |
| <22 | 2> (| 116) | | | | | | | | | | | | | |
| | - | - | quals | s any | y of | the | nati | ural | ly o | ccur | ring | L-ar | nino | acio | ls |
| <22 | 0> | | | | | | | | | | | | | | |
| <22 | 1> S | ITE | | | | | | | | | | | | | |
| <22 | 2> (| 117) | | | | | | | | | | | | | |
| <22 | 3> Xa | aa e | quals | s any | of | the | nati | ıral | ly o | ccur | ring | L-ar | nino | acio | ds |
| <22 | | | - | | | | | | _ | | _ | | | | |
| | 1> S: | r me | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | 2> (2 | | 1 <i>-</i> | | | 440 | | 1 1 | 1 | | -: | T | .: | | 3. |
| ~ Z Z . | 32 X | aa e | quars | s any | 7 01 | the | nati | ıraı | ry o | ccur | ring | L-ai | nino | acı | 15 |
| - 4 0 4 | n | | | | | | | | | | | | | | |
| | 0> 62 | | _ | _ | | _ | _ | _ | | | | | | _ | ٠, |
| | GIn | Asp | Leu | _ | Met | Ser | Cys | Pro | | GIn | Thr | Met | Asp | | GI |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| | | | | | | | | | | | | | | | |
| Val | Thr | Leu | | Leu | Gln | Cys | Pro | Gly | Gly | Gly | Leu | Pro | | Glu | Glr |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| | | | | | | | | | | | | | | | |
| Ile | Gln | Ala | Glu | Leu | Ser | Pro | Ala | His | Asp | Arg | Arg | Pro | Leu | Pro | Gly |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| | | | | | | | | | | | | | | | |
| Gly | Asp | Glu | Ala | Ile | Thr | Ala | Ile | Trp | Glu | Thr | Arg | Leu | Lys | Ala | Glr |
| _ | 50 | | | | | 55 | | _ | | | 60 | | _ | | |
| | | | | | | | | | | | | | | | |
| Pro | Trp | Leu | Phe | Asp | Ala | Pro | Lvs | Phe | Arq | Leu | His | Ser | Ala | Thr | Let |
| 65 | • | | | • | 70 | | • | | • | 75 | | | | | 80 |
| | | | | | | | | | | | | | | • | - |
| Ala | Pro | Tle | Glv | Ser | Ara | Gly | Pro | Gln | Leu | Leu | Leu | Ara | Leu | Glv | Let |
| | | | 1 | 85 | , | 1 | | | 90 | | | 9 | | 95 | |
| | | | | 0.5 | | | | | ,, | | | | | ,, | |
| mb ~ | 605 | m | 7 ~~ | N.c.D | Dho | T OU | C1 | mh- | 300 | m~~ | 50× | Co= | 602 | 11 - | A 1 - |
| Int | ser | Tyr | | Asp | Pne | Leu | GTÅ | | ASII | тгр | ser | ser | | Ala | ATC |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| | _ | _ | | | | | | | | | | | | | |
| Trp | Leu | | Xaa | Xaa | Gly | Ala | | Asp | Trp | Gly | Asp | | Gln | Ala | Ту |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| | | | | | | | | | | | | | | | |
| Leu | Ala | Asp | Pro | Leu | Gly | Val | Gly | Ala | Ala | Leu | Ala | Thr | Ala | Asp | Asp |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| | | | | | | | | | | | | | | | |
| Phe | Leu | Val | Phe | Leu | Arg | Arg | Ser | Arg | Gln | Val | Ala | Glu | Ala | Pro | Gly |
| 145 | | | | | 150 | _ | | _ | | 155 | | | | | 160 |
| _ | | | | | | | | | | | | | | | |
| Leu | Val | Asp | Val | Pro | Glv | Gly | His | Pro | Glu | Pro | Gl n | Ala | Lev | Cvs | Pro |
| | | P | | 165 | 1 | 1 | | | 170 | | | | | 175 | |
| | | | | | | | | | | | | | | ~.5 | |
| Glv | G) v | Ser | Pro | G] n | His | Gln | Asp | Leu | Ala | Glv | G) n | Leu | Val | Val | Hid |
| y | 1 | 201 | 180 | | | U 211 | | 185 | | CLY | 0111 | Lou | 190 | V (3.1 | |
| | | | | | | | | | | | | | | | |

Glu Leu Phe Ser Ser Val Leu Gln Glu Ile Cys Asp Glu Val Asn Leu 195 200 205

Pro Leu Leu Thr Leu Ser Gln Pro Leu Leu Xaa Gly Ile Ala Arg Asn 210 215 220

Glu Thr Ser Ala Gly Arg Ala Ser Ala Glu Phe Tyr Val Gln Cys Ser 225 230 235 240

Leu Thr Ser Glu Gln Val Arg Lys His Tyr Leu Ser Gly Gly Pro Glu 245 250 255

Ala His Glu Ser Thr Gly Ile Phe Phe Val Glu Thr Gln Asn Val Arg
260 265 270

Arg Leu Pro Glu Thr Glu Met Trp Ala Glu Leu Cys Pro Ser Pro Lys 275 280 285

Ala Pro Ser Ser Ser Thr Thr Gly Phe Arg Glu Val Pro Leu Glu Arg 290 295 300

Pro 305

<210> 625

<211> 102

<212> PRT

<213> Homo sapiens

<400> 625

Ser Ala Met Lys Ala Ser Gly Thr Leu Arg Glu Tyr Lys Val Val Gly
1 5 10 15

Arg Cys Leu Pro Thr Pro Lys Cys Arg Thr Pro Pro Leu Tyr Arg Met 20 25 30

Arg Ile Phe Ala Pro Asn His Val Val Ala Lys Ser Arg Phe Trp Tyr 35 40 45

Phe Val Ser Gln Leu Lys Lys Met Lys Lys Ser Ser Gly Glu Ile Val 50 55 60

Tyr Cys Gly Gln Val Phe Glu Lys Ser Pro Leu Arg Val Lys Asn Phe 65 70 75 80

Gly Ile Trp Leu Arg Tyr Asp Ser Arg Ser Gly Thr His Asn Met Tyr

585

Arg Gly Val Pro Gly Thr 100

<210> 626

<211> 59

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (36)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 626

Ala Leu Trp Val Lys Ala Trp Arg Gln Glu Ser Glu Gly Gln Phe Gln 1 5 10 15

Glu Thr Gln Phe Ile Asn Phe His Gln His Leu Pro Gly Pro Cys Leu $20 \hspace{1cm} 25 \hspace{1cm} 30$

Gly Thr Glu Xaa Pro Ser Pro Glu Ser Gly His His Phe Pro Phe Gln 35 40 45

Ser Ile Glu Cys Arg Gly Ile Gln Gly Met Gly 50 55

<210> 627

<211> 220

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (93)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 627

Arg Leu Val Val Thr Glu Glu Asp Gly Gly Ala Arg Pro Glu Ala Leu 1 5 10 15

Gly Lys Ile Ala Pro Arg Thr Pro Ala Glu Leu Gly Ala Arg Ala Asp 20 25 30

Gln Glu Leu Val Thr Ala Leu Met Cys Asp Leu Arg Arg Pro Ala Ala 35 40 45

Gly Gly Met Met Asp Leu Ala Tyr Val Cys Glu Trp Glu Lys Trp Ser

55 50 60 Lys Ser Thr His Cys Pro Ser Val Pro Leu Ala Cys Ala Trp Ser Cys 70 75 Arg Asn Leu Ile Ala Phe Thr Met Asp Leu Arg Thr Xaa Asp Gln Asp 85 90 Leu Thr Arg Met Ile His Ile Leu Asp Thr Glu His Pro Trp Asp Leu 100 105 110 His Ser Ile Pro Ser Glu His His Glu Ala Ile Thr Cys Leu Glu Trp 120 Asp Gln Ser Gly Ser Arg Leu Leu Ser Ala Asp Ala Asp Gly Gln Ile 135 Lys Cys Trp Ser Met Ala Asp His Leu Ala Asn Ser Trp Glu Ser Ser 145 150 155 Val Gly Ser Leu Val Glu Gly Asp Pro Ile Val Ala Leu Ser Trp Leu 165 170 His Asn Gly Val Lys Leu Ala Leu His Val Glu Lys Ser Gly Ala Ser 185 Ser Phe Gly Glu Lys Phe Ser Arg Val Lys Phe Ser Pro Val Leu Thr 195 200 Leu Phe Gly Gly Lys Pro Trp Arg Ala Gly Ser Arg 210 215 <210> 628 <211> 119 <212> PRT <213> Homo sapiens

<212> PRT
<213> Homo sapiens

<220>
<221> SITE
<222> (115)
<223> Xaa equals any of the naturally occurring L-amino acids

<220>
<221> SITE
<222> (117)
<223> Xaa equals any of the naturally occurring L-amino acids

<400> 628
Pro Ala Ser Val Glu Val Tyr His Asp Ser Leu Cys Arg Lys Ile Trp

587

1 .5 10 15

Arg Glu Asp Asp Lys Trp His Val Ile Phe Arg Ala Asp Gly Trp Glu 20 25 30

Gln His Ile Thr Ala Arg Tyr Leu Val Gly Ala Asp Gly Ala Asn Ser

Met Val Arg Arg His Leu Tyr Pro Asp His Gln Ile Arg Lys Tyr Val

Ala Ile Gln Gln Trp Phe Ala Glu Lys His Pro Val Pro Phe Tyr Ser 65 70 75 80

Cys Ile Phe Asp Asn Ser Ile Thr Asn Cys Tyr Ser Trp Ser Ile Ser 85 90 95

Lys Asp Gly Tyr Phe Ile Phe Gly Gly Ala Tyr Pro Met Glu Arg Arg 100 105 \cdot 110

Ser Asp Xaa Phe Xaa Asp Ala 115

<210> 629

<211> 39

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (30)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (31)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 629

Phe Gly Glu Pro Ser Leu Thr Val Arg Ala Asp Ile Thr Gly Arg Tyr
1 5 10 15

Ser Ile Val Ser Met Leu Thr Thr Cys Arg Tyr Ser Leu Xaa Xaa His 20 25 30

Met Lys Lys Val Ser Ser Cys

<210> 630

| | 1> 2 | | | | | | | | | | | | | | |
|-------|------|-------|-------|---------|----------|------|------|-----|---------|------|-----|-------|-----|------|------|
| <21 | 2> P | RT | | | | | | | | | | | | | |
| <21 | 3> н | omo | sapi | ens | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| <40 | 0> 6 | 30 | | | | | | | | | | | | | |
| Ser | Ala | Ala | Leu | Pro | Gln | Pro | Thr | Pro | Pro | Leu | Thr | Leu | Pro | Gln | Ser |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| | | | | | | | | | | | | | | | |
| Met | Val | Asn | Thr | Lys | Pro | Glu | Lys | Thr | Glu | Glu | Asp | Ser | Glu | Glu | Val |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| | | | | | | | | | | | | | | | |
| Arg | Glu | | Lys | His | Lys | Thr | | Val | Glu | Lys | Tyr | | Lys | Gln | Ile |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| • | ••• | | | | _ | _ | _ | _ | _ | _ | _ | | _ | _ | _ |
| Lys | | Phe | GIY | Met | Leu | _ | Arg | Trp | Asp | Asp | | GIn | Lys | Tyr | Leu |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| C - = | 7.00 | N.a.n | tta 1 | uio | T 0 | 17-1 | C | C1 | c1 | mb - | 210 | 3 | M | T | 17.1 |
| | ASP | ASI | vai | HIS | Leu | vaı | Cys | GLU | GIU | | Ата | ASI | Tyr | Leu | |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Tla | Trn | Cve | Tlo | Acn | Leu | Glu | Val | Glu | Glu | Tue | Cve | A 1 a | Len | Mat | Glu |
| 116 | 11p | Cys | 116 | 85 | Deu | Giu | val | GIG | 90 | БХЗ | Cys | AIG | Leu | 95 | GIU |
| | | | | 0,5 | | | | | ,, | | | | | ,,, | |
| Gln | Val | Ala | His | Gln | Thr | Tle | Val | Met | Gln | Phe | Tle | I.en | Glu | T.eu | Ala |
| | | | 100 | | | | | 105 | · · · · | | | | 110 | 200 | |
| | | | | | | | | | | | | | | | |
| Lvs | Ser | Leu | Lvs | Val | Asp | Pro | Arg | Ala | Cvs | Phe | Ara | Gln | Phe | Phe | Thr |
| -1- | | 115 | -1- | | - | | 120 | | -1- | | 9 | 125 | | | |
| | | | | | | | | | | | | | | | |
| Lys | Ile | Lys | Thr | Ala | Asp | Arg | Gln | Tyr | Met | Glu | Gly | Phe | Asn | Asp | Glu |
| • | 130 | • | | | - | 135 | | • | | | 140 | | | _ | |
| | | | | | | | | | | | | | | | |
| Leu | Glu | Ala | Phe | Lys | Glu | Arg | .Val | Arg | Gly | Arg | Ala | Lys | Leu | Arg | Ile |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| | | | | | | | | | | | | | | | |
| Glu | Lys | Ala | Met | Lys | Glu | Tyr | Glu | Glu | Glu | Glu | Arg | Lys | Lys | Arg | Leu |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| | | | | | | | | | | | | | | | |
| Gly | Pro | Gly | Gly | Leu | Asp | Pro | Val | Glu | Val | Tyr | Glu | Ser | Leu | Pro | Glu |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| | | | | | | | | | | | | | | | |
| Glu | Leu | Gln | Lys | Cys | Phe | Asp | Val | Lys | Asp | Val | Gln | Met | Leu | Gln | Asp |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| | | | | | | | | | | | | | | | |
| Ala | Ile | Ser | Lys | Met | Asp | Pro | Thr | Asp | Ala | Lys | Tyr | His | Met | Gln | Arg |
| | 210 | | | | | 215 | | | | | 220 | | | | |
| | | | | | | | | | | | | | | | |
| | Ile | Asp | Ser | Gly | Leu | Trp | Val | Pro | Asn | | Lys | Ala | Ser | Glu | |
| 225 | | | | | 230 | | | | | 235 | | | | | 240 |

Lys Glu Gly Glu Glu Ala Gly Pro Gly Asp Pro Leu Leu Glu Ala Val 245 250 255

Pro Lys Thr Gly Asp Glu Lys Asp Val Ser Val
260 265

<210> 631

<211> 207

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (164)

<223> Kaa equals any of the naturally occurring L-amino acids

<400> 631

Pro Thr Gly Thr Gly Ser Gly Val Pro Gly Leu Gly Arg Asn Gly Gly
1 5 10 15

Arg Glu Gly Ala Pro Gly Thr Met Gly Leu Leu Thr Ile Leu Lys Lys 20 25 30

Met Lys Gln Lys Glu Arg Glu Leu Arg Leu Leu Met Leu Gly Leu Asp 35 40 45

Asn Ala Gly Lys Thr Thr Ile Leu Lys Lys Phe Asn Gly Glu Asp Ile 50 60

Asp Thr Ile Ser Pro Thr Leu Gly Phe Asn Ile Lys Thr Leu Glu His 65 70 75 80

Arg Gly Phe Lys Leu Asn Ile Trp Asp Val Gly Gln Lys Ser Leu 85 90 95

Arg Ser Tyr Trp Arg Asn Tyr Phe Glu Ser Thr Asp Gly Leu Ile Trp
100 105 110

Val Val Asp Ser Ala Asp Arg Gln Arg Met Gln Asp Cys Gln Arg Glu 115 120 125

Leu Gln Ser Leu Leu Val Glu Glu Arg Leu Ala Gly Ala Thr Leu Leu 130 135 140

Ile Phe Ala Asn Lys Gln Asp Leu Pro Gly Ala Leu Ser Ser Asn Ala 145 150 155 160

Ile Arg Glu Xaa Leu Glu Leu Asp Ser Ile Arg Ser His His Trp Cys

165 170 175 Ile Gln Gly Cys Ser Ala Val Thr Gly Glu Asn Leu Leu Pro Gly Ile 180 185 Asp Trp Leu Leu Asp Asp Ile Ser Ser Arg Ile Phe Thr Ala Asp 200 <210> 632 <211> 79 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (54) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (60) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (61) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (73) <223> Xaa equals any of the naturally occurring L-amino acids <400> 632 Lys Asn Asn Lys Lys Asp Gln Gln Asn Gly Ile Cys Ser His Thr Met Ile Lys Thr Tyr Leu Arg Thr Ala Leu Phe Met Gly Lys Arg Ser Leu

25

Ile Asp Ser Gln Phe His Arg Leu Tyr Arg Arg His Gly Leu Gly Arg

Pro Gln Gly Asn Leu Xaa Ser Met Val Glu Gly Xaa Xaa Gly Ser Met

His His Leu His Trp Pro Glu Gln Xaa Glu Arg Glu Gln Ile Trp

55

70

20

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<210> 633
<211> 293
<212> PRT
<213> Homo sapiens
<220>
<221> SITE
<222> (249)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (282)
<223> Xaa equals any of the naturally occurring L-amino acids
<400> 633
Trp Ser Pro Ser Pro Pro Ala Thr Pro Glu Gln Gly Leu Ser Ala Phe
Tyr Leu Ser Tyr Phe Asp Met Leu Tyr Pro Glu Asp Ser Ser Trp Ala-
                                 25
Ala Lys Ala Pro Gly Ala Ser Ser Arg Glu Glu Pro Pro Glu Glu Pro
Glu Gln Cys Pro Val Ile Asp Ser Gln Ala Pro Ala Gly Ser Leu Asp
Leu Val Pro Gly Gly Leu Thr Leu Glu Glu His Ser Leu Glu Gln Val
                   70
Gln Ser Met Val Val Gly Glu Val Leu Lys Asp Ile Glu Thr Ala Cys
Lys Leu Leu Asn Ile Thr Ala Asp Pro Met Asp Trp Ser Pro Ser Asn
                               105
Val Gln Lys Trp Leu Leu Trp Thr Glu His Gln Tyr Arg Leu Pro Pro
        115
Met Gly Lys Ala Phe Gln Glu Leu Ala Gly Lys Glu Leu Cys Ala Met
                        135
Ser Glu Glu Gln Phe Arg Gln Arg Ser Pro Leu Gly Gly Asp Val Leu
                   150
                                       155
His Ala His Leu Asp Ile Trp Lys Ser Ala Ala Trp Met Lys Glu Arq
               165
                                    170
```

Thr Ser Pro Gly Ala Ile His Tyr Cys Ala Ser Thr Ser Glu Glu Ser 180 185 190

Trp Thr Asp Ser Glu Val Asp Ser Ser Cys Ser Gly Gln Pro Ile His 195 200 205

Leu Trp Gln Phe Leu Lys Glu Leu Leu Leu Lys Pro His Ser Tyr Gly
210 215 220

Arg Phe Ile Arg Trp Leu Asn Lys Glu Lys Gly Ile Phe Lys Ile Glu 225 230 235 240

Asp Ser Ala Gln Val Ala Arg Leu Xaa Gly Ile Arg Lys Asn Arg Pro 245 250 255

Ala Met Asn Tyr Asp Lys Leu Ser Arg Ser Ile Arg Gln Tyr Tyr Lys 260 265 270

Lys Gly Ile Ile Arg Lys Pro Asp Ile Xaa Gln Arg Leu Val Tyr Gln
275 280 285

Phe Val His Pro Ile 290

<210> 634

<211> 227

<212> PRT

<213> Homo sapiens

<400> 634

Pro Ala Gly Thr Gly Pro Glu Phe Pro Gly Arg Pro Thr Arg Pro Ala

1 5 10 15

Glu Glu Glu Glu Pro Gln Gln Arg Gly Gln Gly Glu Lys Ser Ala 35 40 45

Thr Pro Ser Arg Lys Ile Leu Asp Pro Asn Thr Gly Glu Pro Ala Pro 50 55 60

Val Leu Ser Ser Pro Pro Pro Ala Asp Val Ser Thr Phe Leu Ala Phe 65 70 75 80

Pro Ser Pro Glu Lys Leu Leu Arg Leu Gly Pro Lys Ser Ser Val Leu 85 90 95

Ile Ala Gln Gln Thr Asp Thr Ser Asp Pro Glu Lys Val Val Ser Ala

593

100 105 110 Phe Leu Lys Val Ser Ser Val Phe Lys Asp Glu Ala Thr Val Arg Met 115 120 Ala Val Gln Asp Ala Val Asp Ala Leu Met Gln Lys Ala Phe Asn Ser 135 Ser Ser Phe Asn Ser Asn Thr Phe Leu Thr. Arg Leu Leu Val His Met Gly Leu Leu Lys Ser Glu Asp Lys Val Lys Ala Ile Ala Asn Leu Tyr 165 Gly Pro Leu Met Ala Leu Asn His Met Val Gln Gln Asp Tyr Phe Pro 185 Lys Ala Leu Ala Pro Leu Leu Leu Ala Phe Val Thr Lys Pro Asn Ser 195 200 205 Ala Leu Glu Ser Cys Ser Phe Ala Arg His Ser Leu Leu Gln Thr Leu 215 Tyr Lys Val 225 <210> 635 <211> 126 <212> PRT <213> Homo sapiens <400> 635 Thr Ser Gly Cys Ile Ser Asn Gly Lys Met Ser Ser Asn Val Pro Ala 10 Asp Met Ile Asn Leu Arg Leu Ile Leu Val Ser Gly Lys Thr Lys Glu Phe Leu Phe Ser Pro Asn Asp Ser Ala Ser Asp Ile Ala Lys His Val Tyr Asp Asn Trp Pro Met Asp Trp Glu Glu Glu Gln Val Ser Ser Pro 55 Asn Ile Leu Arg Leu Ile Tyr Gln Gly Arg Phe Leu His Gly Asn Val 65 Thr Leu Gly Ala Leu Lys Leu Pro Phe Gly Lys Thr Thr Val Met His

594

Leu Val Ala Arg Glu Thr Leu Pro Glu Pro Asn Ser Gln Gly Gln Arg

Asn Arg Glu Lys Thr Gly Glu Ser Asn Cys Cys Val Ile Leu . 115 120 125

<210> 636

<211> 195

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (96)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 636

Val Ser Gly Phe Ala Gly Pro Ala Ser Leu Ile Ser Met Lys Leu Leu 1 5 10 15

Ser Leu Val Ala Val Gly Cys Leu Leu Val Pro Pro Ala Glu Ala 20 25 30

Asn Lys Ser Ser Glu Asp Ile Arg Cys Lys Cys Ile Cys Pro Pro Tyr 35 40 45

Arg Asn Ile Ser Gly His Ile Tyr Asn Gln Asn Val Ser Gln Lys Asp 50 60

Cys Asn Cys Leu His Val Val Glu Pro Met Pro Val Pro Gly His Asp 65 70 75 80

Val Glu Ala Tyr Cys Leu Leu Cys Glu Cys Arg Tyr Glu Glu Arg Xaa 85 90 95

Thr Thr Thr Ile Lys Val Ile Ile Val Ile Tyr Leu Ser Val Val Gly
100 105 110

Ala Leu Leu Tyr Met Ala Phe Leu Met Leu Val Asp Pro Leu Ile 115 120 125

Arg Lys Pro Asp Ala Tyr Thr Glu Gln Leu His Asn Glu Glu Glu Asn 130 135 140

Glu Asp Ala Arg Ser Met Ala Ala Ala Ala Ala Ser Leu Gly Gly Pro 145 150 155 160

Arg Ala Asn Thr Val Leu Glu Arg Val Glu Gly Ala Gln Gln Arg Trp

WO 00/55173

595

165 170 175 Lys Leu Gln Val Gln Glu Gln Arg Lys Thr Val Phe Asp Arg His Lys 180 185 190 Met Leu Ser 195 <210> 637 <211> 159 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (92) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (115) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (138) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (151) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (156) <223> Xaa equals any of the naturally occurring L-amino acids <400> 637 Arg Pro Thr Arg Pro Gly Asn Ser Arg Arg Arg Gly Arg Arg Gly Cys 5 1 10 15 Trp Arg Leu Leu Gly Phe Gly Ala Ala Ile Met Pro Gly Ile Val 20 30 Glu Leu Pro Thr Leu Glu Asp Leu Lys Val Gln Glu Val Lys Val Ser

40

Ser Ser Val Leu Lys Ala Ala Ala His His Tyr Gly Val Gln Cys Asp

596

50 55 60

Lys Pro Asn Lys Glu Phe Met Leu Cys Arg Trp Glu Glu Lys Asp Pro 65 70 75 80

Arg Arg Cys Leu Glu Glu Gly Lys Leu Val Asn Xaa Cys Ala Leu Asp 85 90 95

Phe Phe Arg Gln Ile Lys Leu Ser Leu Cys Arg Ala Phe Tyr Arg Leu 100 105 110

Leu Asp Xaa His Arg Leu Leu Arg Pro Ala Val Phe Ser Ser Leu Pro 115 120 125

Gln Thr Ala Gly Gln Phe Asp Asp Val Xaa Gly Ala Thr Gly Met Val 130 135 140

Arg Leu Asn Trp Gly Lys Xaa Ser Ser His Gln Xaa Glu Asn Ser 145 150 155

<210> 638

<211> 20

<212> PRT

<213> Homo sapiens

<400> 638

Phe Ser Arg Asp Lys Val Ser Pro Cys Trp Pro Gly Trp Ser Arg Thr 1 5 10 15

Pro Gly Leu Arg 20

<210> 639

<211> 408

<212> PRT

<213> Homo sapiens

<400> 639

Thr Trp Gly Gln Thr Pro Cys Ser Pro Gly His Gly Gln Arg Pro Ser 1 5 10 15

Ser Thr Cys Leu Thr Val Gly Pro Gly Gly Gly Pro Ser Leu Gly Arg
20 25 30

Pro Cys Pro Gln Leu Leu Gln Phe Gly Val Leu Phe Cys Thr Ile 35 40 45

| Leu | Leu 50 | Leu | Leu | Trp | Val | Ser 55 | Val | Phe | Leu | Тyr | Gly 60 | Ser | Phe | Туr | Туі |
|------------|------------|------------|------------|------------------|------------|------------|------------|------------|------------|------------|------------|-------------------|------------|------------|------------|
| Ser 65 | Tyr | Met | Pro | Thr | Val 70 | Ser | His | Leu | Ser | Pro 75 | Val | His | Phe | Tyr | Ту1 80 |
| Arg | Thr | Asp | Cys | Asp 85 | Ser | Ser | Thr | Thr | Ser 90 | Leu | Cys | Ser | Phe | Pro 95 | Val |
| Ala | Asn | Val | Ser 100 | Leu | Thr | Lys | Gly | Gly 105 | Arg | Asp | Arg | Va [·] l | Leu 110 | Met | Туг |
| Gly | Gln | Pro 115 | Tyr | Arg | Val | Thr | Leu 120 | Glu | Leu | Glu | Leu | Pro 125 | Glu | Ser | Pro |
| Val | Asn 130 | Gln | Asp | Leu | Gly | Met 135 | Phe | Leu | Val | Thr | 11e 140 | Ser | Cys | Tyr | Thr |
| Arg 145 | Gly | Gly | Arg | Ile | Ile 150 | Ser | Thr | Ser | Ser | Arg 155 | Ser | Val | Met | Leu | His |
| Tyr | Arg | Ser | Asp | Leu 165 | Leu | Gln | Met | Leu | Asp 170 | Thr | Leu | Val | Phe | Ser 175 | Ser |
| Leu | Leu | Leu | Phe 180 | Gly | Phe | Ala | Glu | Gln 185 | Lys | Gln | Leu | Leu | Glu 190 | Val | Glu |
| Leu | Tyr | Ala 195 | Asp | Tyr | Arg | Glu | Asn 200 | Ser | Tyr | Val | Pro | Thr 205 | Thr | Gly | Ala |
| Ile | 11e 210 | Glu | Ile | His | Ser | Lys 215 | Arg | Ile | Gln | Leu | Tyr 220 | Gly | Ala | Tyr | Leu |
| Arg 225 | Ile | His | Ala | His | Phe 230 | Thr | Gly | Leu | Arg | Tyr 235 | Leu | Leu | Tyr | Asn | Phe 240 |
| Pro | Met | Thr | Cys | Ala 245 | Phe | Ile | Gly | Val | Ala 250 | Ser | Asn | Phe | Thr | Phe 255 | Leu |
| Ser | Val | Ile | Val 260 | Leu [.] | Phe | Ser | Tyr | Met 265 | Gln | Trp | Val | Trp | Gly 270 | Gly | Ile |
| Trp | Pro | Arg 275 | His | Arg | Phe | Ser | Leu 280 | Gln | Val | Asn | Ile | Arg 285 | Lys | Arg | Asp |
| Asn | Ser 290 | Arg | Lys | Glu | Val | Gln 295 | Arg | Arg | Ile | Ser | Ala 300 | His | Gln | Pro | Gly |
| Pro 305 | Glu | Gly | Gln | Glu | Glu 310 | Ser | Thr | Pro | Gln | Ser 315 | Asp | Val | Thr | Glu | Asp 320 |

598

Gly Glu Ser Pro Glu Asp Pro Ser Gly Thr Glu Gly Gln Leu Ser Glu 325 330 Glu Glu Lys Pro Asp Gln Gln Pro Leu Ser Gly Glu Glu Glu Leu Glu 345 Pro Glu Ala Ser Asp Gly Ser Gly Ser Trp Glu Asp Ala Ala Leu Leu 360 Thr Glu Ala Asn Leu Pro Ala Pro Ala Pro Ala Ser Ala Ser Ala Pro 375 380 Val Leu Glu Thr Leu Gly Ser Ser Glu Pro Ala Gly Gly Ala Leu Arg 390 395 Gln Arg Pro Thr Cys Ser Ser Ser 405 <210> 640 <211> 288 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (10) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (15) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (268) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (271) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (273) <223> Xaa equals any of the naturally occurring L-amino acids <220>

| <22 | 1> S | ITE | | | | | | | | | | | | | |
|-------|-----------|--------------|------------|-----------|-------------|-----------|-------|------------|------|----------|-----------|----------|------------|-----|-----|
| <22 | 2> (| 274) | | | | | | | | | | | | | |
| <22 | 3> X | aa e | qual | s an | y of | the | nat | ural | ly o | ccur | ring | L-a | mino | aci | ds |
| <22 | 0> | | | | | | | | | | | | | | |
| <22 | 1> s | ITE | | | | | | | | | | | | | |
| <22 | 2> (| 276) | | | | | | | | | | | | | |
| <22 | 3> x | aa e | qual | s an | y of | the | nat | ural | ly o | ccur | ring | L-a | mino | aci | ds |
| <22 | 0> | | | | | | | | | | | | | | |
| <22 | 1> s | ITE | | | | | | | | | | | | | |
| <22 | 2> (| 286) | | | | | | | | | | | | | |
| <22 | 3> X | aa e | qual | s an | y of | the | nati | ural | ly o | ccur | ring | L-aı | mino | aci | ds |
| <400 | 0> 6 | 40 | | | | | | · | | | | | | | |
| Phe | Ser | Ser | Ser | Ala | Cys | Pro | Ser | Val | Xaa | Ser | Leu | Phe | Val | Xaa | Leu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Gly | Lys | Asn | Pro | His | Asp | Ala | Gln | Glv | His | Pro | Ara | Ala | Ser | Glu | Asp |
| | - | | 20 | | | | | 25 | | | , | | 30 | | |
| Gln | Pro | Ser | Ser | Glv | Lvs | Pro | Val | Thr | Ser | ጥህኮ | Pro | Glv | Glu | Cve | Glv |
| | | 35 | | 1 | 2,0 | | 40 | | 001 | -1- | 110 | 45 | 014 | Cys | Cly |
| Dh.a | 17-3 | Dh.a | mb - | • | - 1 | | _ | _ | | | | _ | | _ | _ |
| rne | va1 50 | Pne | Thr | ьys | GIU | A1a 55 | ser | Leu | Glu | He | Arg 60 | Asp | Met | Leu | Leu |
| | | | | | | | | | | | ••• | | | | |
| Ala | Asn | Lys | Val | Pro | Ala | Ala | Ala | Arg | Ala | Gly | Ala | Ile | Ala | Pro | Cys |
| 65 | | | | | 70 | | | _ | | 75 | | | | | 80 |
| -1 | | | | _ | | | _ | | | | | • | | | |
| GIU | vai | Thr | Val | Pro 85 | Ala | GIn | Asn | Thr | | Leu | GLy | Pro | Glu | | Thr |
| | | | | 0.5 | | | | | 90 | | | | | 95 | |
| Ser | Phe | Phe | Gln | Ala | Leu | Gly | Ile | Thr | Thr | Lys | Ile | Ser | Arg | Gly | Thr |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Ile | Glu | Ile | Leu | Ser | Asp | Val | Gln | Leu | Ile | Lvs | Thr | Glv | Asp | Lvs | Val |
| | | 115 | | | • | | 120 | | | -4 | | 125 | | -1- | |
| C1 | A 3 a | 50= | C1 | . 1 - | mh- | T | T | • | | • | • | -1- | | | |
| GIÀ | 130 | ser | Glu | Ald | THE | 135 | ren | Asn | met | Leu | 140 | 116 | ser | Pro | Phe |
| | | | | | | | | | | | | | | | |
| | Phe | Gly | Leu | Ile | Ile | Gln | Gln | Val | Phe | Asp | Asn | Gly | Ser | Ile | Tyr |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Asn | Pro | Glu | Val | Leu | Asp | Ile | Thr | Glu | Glu | Thr | Leu | His | Ser | Arg | Phe |
| | | | | 165 | - | | | | 170 | | | | | 175 | |
| T 0:- | C1 ·· | ر. د ا ان | 17-3 | 7 | > | U . 3 | A 7 - | 0 | | 6 | • . | . | ., | | _ |
| ren | oru | GTÅ | Val 180 | wrd | ASN | val | WIS | Ser 185 | vai | cys | ren | GIN | 11e 190 | Gly | Tyr |

600

Pro Thr Val Ala Ser Val Pro His Ser Ile Ile Asn Gly Tyr Lys Arg 195 200 205

Val Leu Ala Leu Ser Val Glu Thr Asp Tyr Thr Phe Pro Leu Ala Glu 210 215 220

Lys Val Lys Ala Phe Leu Ala Asp Pro Ser Ala Phe Val Ala Ala Ala 225 230 235 240

Pro Val Ala Ala Ala Thr Thr Ala Ala Pro Ala Ala Ala Ala Pro 245 250 255

Ala Lys Val Glu Ala Lys Glu Glu Ser Glu Glu Xaa Asp Glu Xaa Ile 260 265 270

Xaa Xaa Ser Xaa Ile Ser Lys Ser Asn Asn Ser Ser Gln Xaa Ile Val 275 280 285

<210> 641

<211> 444

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (34)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 641

Asn Glu Gln Asp Asn Cys Val Leu Ile His Asp Val Asp Gln Arg Asn 1 5 10 15

Ser Asp Lys Asp Ile Phe Gly Asp Ala Cys Asp Asn Cys Leu Ser Val 20 25 30

Leu Xaa Asn Asp Gln Lys Asp Thr Asp Gly Asp Gly Asp Ala
35 40 45

Cys Asp Asp Met Asp Gly Asp Gly Ile Lys Asn Ile Leu Asp Asn 50 55 60

Cys Pro Lys Phe Pro Asn Arg Asp Gln Arg Asp Lys Asp Gly Asp Gly 65 70 75 80

Val Gly Asp Ala Cys Asp Ser Cys Pro Asp Val Ser Asn Pro Asn Gln 85 90 95

| Ser | Asp | Val | Asp 100 | Asn | Asp | Leu | Val | Gly 105 | Asp | Ser | Cys | Asp | Thr 110 | Asn | Gln |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Asp | Ser | Asp 115 | Gly | Asp | Gly | His | Gln 120 | Asp | Ser | Thr | Asp | Asn 125 | Cys | Pro | Thr |
| Val | Ile 130 | Asn | Ser | Ala | Gln | Leu 135 | Asp | Thr | Asp | Lys | Asp 140 | Gly | Ile | Gly | Asp |
| Glu 145 | Cys | Asp | Asp | Asp | Asp 150 | Asp | Asn | Asp | Gly | Ile 155 | Pro | Asp | Leu | Val | Pro 160 |
| Pro | Gly | Pro | Asp | Asn 165 | Cys | Arg | Leu | Val | Pro 170 | Asn | Pro | Ala | Gln | Glu 175 | Asp |
| Ser | Asn | Ser | Asp 180 | Gly | Val | Gly | Asp | Ile 185 | Cys | Glu | Ser | Asp | Phe 190 | Asp | Gln |
| Asp | Gln | Val 195 | Ile | Asp | Arg | Ile | Asp 200 | Val | Cys | Pro | Glu | Asn 205 | Ala | Glu | Val |
| Thr | Leu 210 | Thr | Asp | Phe | Arg | Ala 215 | Туr | Gln | Thr | Val | Val 220 | Leu | Asp | Pro | Glu |
| Gly 225 | Asp | Ala | Gln | Ile | Asp 230 | Pro | Asn | Trp | Val | Val 235 | Leu | Asn | Gln | Gly | Met 240 |
| Glu | Ile | Val | Gln | Thr 245 | Met | Asn | Ser | Asp | Pro 250 | Gly | Leu | Ala | Val | Gly 255 | Туr |
| Thr | Ala | Phe | Asn 260 | Gly | Val | Asp | Phe | Glu 265 | Gly | Thr | Phe | His | Val 270 | Asn | Thr |
| Gln | Thr | Asp 275 | Asp | Asp | Tyr | Ala | Gly 280 | Phe | Ile | Phe | Gly | Туг 285 | Gln | Asp | Ser |
| Ser | Ser 290 | Phe | Tyr | Val | Val | Met 295 | Trp | Lys | Gln | Thr | Glu 300 | Gln | Thr | Tyr | Trp |
| Gln 305 | Ala | Thr | Pro | Phe | Arg 310 | Ala | Val | Ala | Glu | Pro 315 | Gly | Ile | Gln | Leu | Lys 320 |
| Ala | Val | Lys | Ser | Lys 325 | Thr | Gly | Pro | Gly | Glu 330 | His | Leu | Arg | Asn | Ser 335 | Leu |
| Trp | His | Thr | Gly 340 | Asp | Thr | Ser | Asp | Gln 345 | Val | Arg | Leu | Leu | Тгр 350 | Lys | Asp |
| Ser | Arg | Asn 355 | Val | Gly | Trp | Lys | Asp 360 | Lys | Val | Ser | Tyr | Arg 365 | Trp | Phe | Leu |

602

Gln His Arg Pro Gln Val Gly Tyr Ile Arg Val Arg Phe Tyr Glu Gly Ser Glu Leu Val Ala Asp Ser Gly Val Thr Ile Asp Thr Thr Met Arg 390 395 Gly Gly Arg Leu Gly Val Phe Cys Phe Ser Gln Glu Asn Ile Ile Trp 410 Ser Asn Leu Lys Tyr Arg Cys Asn Asp Thr Ile Pro Glu Asp Phe Gln 425 Glu Phe Gln Thr Gln Asn Phe Asp Arg Phe Asp Asn 440 <210> 642 <211> 326 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (50) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (296) <223> Xaa equals any of the naturally occurring L-amino acids <400> 642 Ser Ala Arg Ala Ser Asp Leu Gly Ala Pro Arg Thr Trp Thr Gly Ala Ala Ala Gly Pro Arg Thr Pro Ser Ala His Ile Pro Val Pro Ala Gln 20 25 Arg Ala Thr Pro Gly Lys Ala Arg Leu Asp Glu Val Met Ala Ala Ala Ala Xaa Thr Ser Leu Ser Thr Ser Pro Leu Leu Gly Ala Pro Val 55 Ala Ala Phe Ser Pro Glu Pro Gly Leu Glu Pro Trp Lys Glu Ala Leu 65 70 Val Arg Pro Pro Gly Ser Tyr Ser Ser Ser Ser Asn Ser Gly Asp Trp

90

603

| Gly | Trp | Asp | Leu 100 | Ala | Ser | Asp | Gln | Ser 105 | Ser | Pro | Ser | Thr | Pro 110 | Ser | Pro |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Pro | Leu | Pro 115 | Pro | Glu | Ala | Ala | His 120 | Phe | Leu | Phe | Gly | Glu 125 | Pro | Thr | Leu |
| Arg | Lys 130 | Arg | Lys | Ser | Pro | Ala 135 | Gln | Val | Met | Phe | Gln 140 | Cys | Leu | Trp | Lys |
| Ser 145 | Cys | Gly | Lys | Val | Leu 150 | Ser | Thr | Ala | Ser | Ala 155 | Met | Gln | Arg | His | 11e 160 |
| Arg | Leu | Val | His | Leu 165 | Gly | Arg | Gln | Ala | Glu 170 | Pro | Asp | Gln | Ser | Asp 175 | Gly |
| Glu | Glu | Asp | Phe 180 | туг | Tyr | Thr | Glu | Leu 185 | Asp | Val | Gly | Val | Asp 190 | Thr | Leu |
| Thr | Asp | Gly 195 | Leu | Ser | Ser | Leu | Thr 200 | Pro | Val | Ser | Pro | Thr 205 | Ala | Ser | Met |
| Pro | Pro 210 | Ala | Phe | Pro | Arg | Leu 215 | Glu | Leu | Pro | Glu | Leu 220 | Leu | Glu | Pro | Pro |
| Ala 225 | Leu | Pro | Ser | Pro | Leu 230 | Arg | Pro | Pro | Ala | Pro 235 | Pro | Leu | Pro | Pro | Pro 240 |
| Pro | Val | Leu | Ser | Thr 245 | Val | Ala | Asn | Pro | Gln 250 | Ser | Cys | His | Ser | Asp 255 | Arg |
| Val | Tyr | Gln | Gly 260 | Cys | Leu | Thr | Pro | Ala 265 | Arg | Leu | Glu | Pro | Gln 270 | Pro | Thr |
| Glu | Val | Gly 275 | Ala | Cys | Pro | Pro | Ala 280 | Leu | Ser | Ser | Arg | Ile 285 | Gly | Val | Thr |
| Leu | Arg 290 | Lys | Pro | Arg | Gly | Asp 295 | Xaa | Lys | Lys | Cys | Arg 300 | Lys | Val | туг | Gly |
| Met 305 | Glu | Arg | Arg | Asp | Leu 310 | Trp | Cys | Thr | Ala | Cys 315 | Arg | Trp | Lys | Lys | Ala 320 |
| Cys | Gln | Arg | Phe | Leu | Asp | | | | | | | | | | • |

<210> 643

325

<211> 129

<212> PRT

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<213> Homo sapiens
<220>
<221> SITE
<222> (9)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (10)
<223> Xaa equals any of the naturally occurring L-amino acids
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<223> Xaa equals any of the naturally occurring L-amino acids
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<222> (19)
<223> Xaa equals any of the naturally occurring L-amino acids
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<222> (94)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (103)
<223> Xaa equals any of the naturally occurring L-amino acids
<400> 643
Asp Val Arg Leu Ser Gly Arg Asn Xaa Xaa Val Asp Val Xaa Asp His
                  5
                                     10
                                                          15
```

605

Gln Xaa Xaa Leu Leu Glu Gln Xaa Asp Leu Leu Ala Gly Leu Ile Ser 20 25 30

Asn Ser Ser Asp Ala Xaa Asp Lys Ile Arg Tyr Glu Ser Leu Thr Asp 35 40 45

Pro Ser Lys Leu Asp Ser Gly Lys Glu Leu His Ile Asn Leu Ile Pro 50 55 60

Asn Lys Gln Asp Arg Thr Leu Thr Ile Val Gly Tyr Arg Asp Arg Met 65 70 75 80

Thr Lys Ala Asp Leu Ile Asn Asn Leu Gly Thr Ile Ala Xaa Ser Gly 85 90 95

Thr Lys Ala Phe Met Glu Xaa Leu Gln Ala Gly Ala Asp Ile Ser Met 100 105 110

Ile Gly Gln Phe Gly Val Gly Phe Tyr Ser Ala Tyr Leu Val Ala Arg 115 120 125

Arg

<210> 644

<211> 156

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (12)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 644

Ser Thr His Ala Ser Ala Ser Arg Arg Leu Leu Xaa Asp Val Cys Gln 1 5 10 15

Asp Cys Ile Gln Met Val Thr Asp Ile Gln Thr Ala Val Arg Thr Asn 20 25 30

Ser Thr Phe Val Glu Ala Leu Val Asp His Ala Lys Ala Gln Cys Asp 35 40 45

Leu Leu Gly Pro Gly Met Ala Asp Met Cys Lys Asn Tyr Ile Asn Gln 50 60

Tyr Ser Asp Ile Ala Val Gln Met Met Met His Met Gln Pro Lys Glu 65 70 . 75 80

606

Ile Cys Gly Leu Val Gly Phe Cys Asp Gln Val Lys Glu Met Pro Met
85 90 95

Gln Thr Leu Ile Pro Ala Lys Ala Val Ser Glu Asn Val Ile Pro Ala 100 . 105 110

Leu Glu Leu Val Glu Pro Ile Lys Lys Asp Thr Val Gln Ala Lys Thr 115 120 125

Ser Val Ser Cys Gly Asp Met Arg Val Thr Trp Leu Lys Glu Val Ala 130 135 140

Lys Leu His Trp Thr Thr Gly Leu Arg Lys Lys 145 150 155

<210> 645

<211> 115

<212> PRT

<213> Homo sapiens

<400> 645

Ala Asp Pro Gly Val Gly Ala Val Pro Gly Leu Ala Ala Asp Leu Ala 1 5 10 15

Thr Ala Ala Arg Ser Leu Gly Pro Ala Leu Val Leu Asp Leu Gly Arg
20 25 30

Pro Pro Ser Pro Asp Pro His Glu Gly Pro Ser Pro Ser Pro Arg Arg
35 40 45

Ser Pro Asp Leu Val Arg Gly Pro Gly Pro Gly Leu Gly Pro Gly Val
50 55 60

Leu Pro Gln Cys Pro Arg Gly Asn Pro Asn Pro Gly Arg Asp Arg Arg 65 70 75 80

Val Pro Pro Ser Leu Leu Lys Arg Lys Glu Arg Cys Pro Leu Lys Lys 85 90 95

Met Val Met Ser Gly Asn Pro Arg His Ile Thr Leu Ile His Lys Trp 100 105 110

Asp Leu Gly

607

<211> 153 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (127) <223> Xaa equals any of the naturally occurring L-amino acids <400> 646 Tyr Met Pro Asn Gly Ser Leu Asn Glu Leu Leu His Arg Lys Thr Glu Tyr Pro Asp Val Ala Trp Pro Leu Arg Phe Arg Ile Leu His Glu Ile Ala Leu Gly Val Asn Tyr Leu His Asn Met Thr Pro Pro Leu Leu His His Asp Leu Lys Thr Gln Asn Ile Leu Leu Asp Asn Glu Phe His Val 50 . 55 Lys Ile Ala Asp Phe Gly Leu Ser Lys Trp Arg Met Met Ser Leu Ser 70 Gln Ser Arg Ser Ser Lys Ser Ala Pro Glu Gly Gly Thr Ile Ile Tyr Met Pro Pro Glu Asn Tyr Glu Pro Gly Gln Lys Ser Arg Ala Ser Ile 105 Lys His Asp Ile Tyr Ser Tyr Ala Val Ile Thr Trp Glu Val Xaa Ser 120 Arg Lys Gln Pro Phe Glu Asp Val Thr Asn Pro Leu Gln Ile Met Tyr 135 Ser Val Ser Gln Gly His Trp Thr Gly 145 150 <210> 647 <211> 220 <212> PRT

Ala Ser Glu Gln Gly Ala Val Gly Gln Gly Gly Leu Ala Gly Val Pro

10

5

<213> Homo sapiens

<400> 647

608

Thr Leu Thr Ser Leu Pro Ser Ser Cys Pro Glu Pro Arg Pro Ser Met 20 25 30

Asp Ala Val Asp Ala Thr Met Glu Lys Leu Arg Ala Gln Cys Leu Ser 35 40 45

Arg Gly Ala Ser Gly Ile Gln Gly Leu Ala Arg Phe Phe Arg Gln Leu 50 55 60

Asp Arg Asp Gly Ser Arg Ser Leu Asp Ala Asp Glu Phe Arg Gln Gly 65 70 75 80

Leu Ala Lys Leu Gly Leu Val Leu Asp Gln Ala Glu Ala Glu Gly Val 85 90 95

Cys Arg Lys Trp Asp Arg Asn Gly Ser Gly Thr Leu Asp Leu Glu Glu
100 105 110

Phe Leu Arg Ala Leu Arg Pro Pro Met Ser Gln Ala Arg Glu Ala Val 115 120 125

Ile Ala Ala Ala Phe Ala Lys Leu Asp Arg Ser Gly Asp Gly Val Val
130 135 140

Thr Val Asp Asp Leu Arg Gly Val Tyr Ser Gly Arg Ala His Pro Lys 145 150 155 160

Val Arg Ser Gly Glu Trp Thr Glu Asp Glu Val Leu Arg Arg Phe Leu 165 170 . 175

Asp Asn Phe Asp Ser Ser Glu Lys Asp Gly Gln Val Thr Leu Ala Glu 180 185 190

Phe Gln Asp Tyr Tyr Ser Gly Val Ser Ala Ser Met Asn Thr Asp Glu 195 200 205

Glu Phe Val Ala Met Met Thr Ser Ala Trp Gln Leu 210 215 220

<210> 648

<211> 118

<212> PRT

<213> Homo sapiens

<400> 648

Asp Asn Arg Thr Leu Thr Lys Gly Pro Asp Thr Val Gly Thr Met Gly $1 \hspace{1cm} 5 \hspace{1cm} 10 \hspace{1cm} 15$

Gln Cys Arg Ser Ala Asn Ala Glu Asp Ala Gln Glu Phe Ser Asp Val

609

20 .25 30

Glu Arg Ala Ile Glu Thr Leu Ile Lys Asn Phe His Gln Tyr Ser Val 35 40 45

Glu Gly Gly Lys Glu Thr Leu Thr Pro Ser Glu Leu Arg Asp Leu Val

Thr Gln Gln Leu Pro His Leu Met Pro Ser Asn Cys Gly Leu Glu Glu 65 70 75 80

Lys Ile Ala Asn Leu Gly Ser Cys Asn Asp Ser Lys Leu Glu Phe Arg 85 90 95

Ser Phe Trp Glu Leu Ile Gly Glu Ala Ala Lys Ser Val Lys Leu Glu 100 105 110

Arg Pro Val Arg Gly His

<210> 649

<211> 309

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (77)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (160)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 649

Asp His His Gln Gly Ala Glu Ser Val Pro Gly Ile Gly Val Ser Pro 1 5 10 15

Thr Ser Ser Ser Cys Pro Pro Thr Ser Cys Thr Gln Pro Val Thr 20 25 30

Thr Trp Ser Pro Gly Leu Arg Val Glu Ser Leu Asp Gly Ala Lys Thr
35 40 45

Gly Lys Gly Ala Leu Thr Gly Ala Pro Gly Ser Phe Gly Ser Ser Glu $50 \hspace{1cm} 55 \hspace{1cm} 60$

Phe Leu Thr Gly Leu Arg Asn Thr Ser Glu Ala Arg Xaa Thr Arg Gly

| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Pro | Ile | Met | Gln | G1u 85 | Pro | Arg | Arg | Val | Thr 90 | Pro | Cys | Leu | Gly | Lys 95 | Arg |
| Gly | Val | Lys | Thr 100 | Pro | Gln | Leu | Gln | Pro 105 | Gly | Ser | Ala | Phe | Leu 110 | Pro | Arg |
| Val | Arg | Arg 115 | Gln | Ser | Phe | Pro | Ala 120 | Arg | Ser | Asp | Ser | Tyr 125 | Thr | Thr | Val |
| Arg | Asp 130 | Phe | Leu | Ala | Val | Pro 135 | Arg | Thr | Ile | Ser | Ser 140 | Ala | Ser | Ala | Thr |
| Leu 145 | Ile | Met | Ala | Val | Ala 150 | Val | Ser | His | Phe | Arg 155 | Pro | Gly | Pro | Glu | Xaa 160 |
| Trp | Asp | Thr | Ala | Ser 165 | Met | Ala | Ala | Ser | Lys 170 | Val | Lys | Gln | Asp | Met 175 | Pro |
| Pro | Pro | Gly | Gly 180 | Tyr | Gly | Pro | Ile | Asp 185 | Tyr | Lys | Arg | Asn | Leu 190 | Pro | Arg |
| Arg | Gly | Leu 195 | Ser | Gly | Tyr | Ser | Met 200 | Leu | Ala | Ile | Gly | 11e 205 | Gly | Thr | Leu |
| Ile | Tyr 210 | Gly | His | Trp | Ser | 11e 215 | Met | Lys | Trp | Asn | Arg 220 | Glu | Arg | Arg | Arg |
| Leu 225 | Gln | Ile | Glu | Asp | Phe 230 | Glu | Ala | Arg | Ile | Ala 235 | Leu | Leu | Pro | Leu | Leu 240 |
| Gln | Ala | Glu | Thr | Asp 245 | Arg | Arg | Thr | Leu | Gln 250 | Met | Leu | Arg | Glu | Asn 255 | Leu |
| Glu | Glu | Glu | Ala 260 | Ile | Ile | Met | Lys | Asp 265 | Val | Pro | Asp | Trp | Lys 270 | Val | Gly |
| Glu | Ser | Val 275 | Phe | His | Thr | Thr | Arg 280 | Trp | Val | Pro | Pro | Leu 285 | Ile | Gly | Glu |
| Leu | Туг 290 | Gly | Leu | Arg | Thr | Thr 295 | Glu | Glu | Ala | Leu | His 300 | Ala | Ser | His | Gly |
| Phe 305 | Met | Trp | Tyr | Thr | | | | | | | | | | | |

<210> 650 <211> 286 WO 00/55173

| | 2> РI 3> Но | | sapi | ens | | | | | | | | | | | |
|------------|----------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| - 4 0 | | - ^ | | | | | | | | | | | | | |
| | 0> 6: Pro | | Leu | Ile 5 | Thr | Ala | Phe | Val | Leu 10 | Ala | Thr | Ser | Gln | Ala 15 | Gln |
| Ala | Gly | Trp | Leu 20 | Gln | His | Asp | Tyr | Gly 25 | His | Leu | Ser | Val | Tyr 30 | Arg | Lys |
| Pro | Lys | Trp 35 | Asn | His | Leu | Val | His 40 | Lys | Phe | Val | Ile | Gly 45 | His | Leu | Lys |
| Gly | Ala 50 | Ser | Ala | Asn | Trp | Trp 55 | Asn | His | Arg | His | Phe 60 | Gln | His | His | Ala |
| Lys 65 | Pro | Asn | Ile | Phe | His 70 | Lys | Asp | Pro | Asp | Val 75 | Asn | Met | Leu | His | Val 80 |
| Phe | Val | Leu | Gly | Glu 85 | Trp | Gln | Pro | Ile | Glu 90 | Tyr | Gly | Lys | Lys | Lys 95 | Leu |
| Lys | Tyr | Leu | Pro 100 | Tyr | Asn | His | Gln | His 105 | Glu | туг | Phe | Phe | Leu 110 | Ile | Gly |
| Pro | Pro | Leu 115 | Leu | Ile | Pro | Met | Туг 120 | Phe | Gln | Tyr | Gln | Ile 125 | Ile | Met | Thr |
| Met | Ile 130 | Val | His | Lys | Asn | Trp 135 | Val | Asp | Leu | Ala | Trp 140 | Ala | Val | Ser | туг |
| Туг 145 | Ile | Arg | Phe | Phe | 11e 150 | Thr | туr | Ile | Pro | Phe 155 | Tyr | Gly | Ile | Leu | Gly 160 |
| Ala | Leu | Leu | Phe | Leu 165 | Asn | Phe | Ile | Arg | Phe 170 | Leu | Glu | Ser | His | Trp 175 | Phe |
| Val | Trp | Val | Thr 180 | Gln | Met | Asn | His | 11e 185 | Val | Met | Glu | Ile | Asp 190 | Gln | Glu |
| Ala | Tyr | Arg 195 | Asp | Trp | Phe | Ser | Ser 200 | Gln | Leu | Thr | Ala | Thr 205 | Cys | Asn | Val |
| Glu | Gln 210 | Ser | Phe | Phe | Asn | Asp 215 | Trp | Phe | Ser | Gly | His 220 | Leu | Asn | Phe | Gln |
| 11e 225 | Glu | His | His | Leu | Phe 230 | Pro | Thr | Met | Pro | Arg 235 | His | Asn | Leu | His | Lys 240 |

Ile Ala Pro Leu Val Lys Ser Leu Cys Ala Lys His Gly Ile Glu Tyr

250

612

Gln Glu Lys Pro Leu Leu Arg Ala Leu Leu Asp Ile Ile Arg Ser Leu 260 265 270

Lys Lys Ser Gly Lys Leu Trp Leu Asp Ala Tyr Leu His Lys 275 280 285

<210> 651

<211> 184

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (35)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (57)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (71)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (106)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 653

Glu Arg Gly Pro Ile Pro Val Cys Pro His Lys Ala Ala Ser Ser Val 1 5 15

Ile Ser Leu Leu Arg Ala Glu Leu Arg Leu Tyr Thr Asp Pro His Lys
20 25 30

Tyr His Xaa Phe Cys Leu Arg Lys Asp Lys Ala His Val Cys Phe Cys
35 40 45

Phe Arg Phe Leu Phe Ser Phe Phe Xaa Glu Ala Leu Trp Arg Ser Met 50 55 60

Phe Leu Leu Ser Phe Leu Xaa Lys Pro Ser Phe Trp Ala Thr Gly Leu 65 70 75 80

Ile Leu Ser Thr Ser Ser Phe Pro Pro Phe Ser Ile Val Ser Leu Pro

613

95 85 90 Pro Ser His Pro Thr Arg Ala Pro Leu Xaa Leu Ser Phe Pro Ser Ser 100 105 Pro Ala Val Ser Phe Leu Arg Ser Gly Thr Lys Leu Ile Phe Arg Arg 120 Arg Pro Arg Gln Lys Glu Ala Gly Leu Ser Gln Ser His Asp Asp Leu 135 Ser Asn Ala Thr Ala Thr Pro Ser Val Arg Lys Lys Ala Gly Ser Phe 145 150 155 Ser Arg Arg Leu Ile Lys Arg Phe Ser Phe Lys Ser Lys Pro Lys Ala 170 165 Asn Gly Asn Pro Ser Pro Gln Leu <210> 652 <211> 641 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (438) <223> Xaa equals any of the naturally occurring L-amino acids Gln Gly Ser Glu Pro Ser Ser Glu Asn Ala Asn Asp Thr Ile Ile Leu 5 10 Arg Asn Leu Asn Pro His Ser Thr Met Asp Ser Ile Leu Gly Ala Leu 25 Ala Pro Tyr Ala Val Leu Ser Ser Ser Asn Val Arg Val Ile Lys Asp 35 40 Lys Gln Thr Gln Leu Asn Arg Gly Phe Ala Phe Ile Gln Leu Ser Thr 55 Ile Glu Ala Ala Gln Leu Leu Gln Ile Leu Gln Ala Leu His Pro Pro

Leu Thr Ile Asp Gly Lys Thr Ile Asn Val Glu Phe Ala Lys Gly Ser

614

Lys Arg Asp Met Ala Ser Asn Glu Gly Ser Arg Ile Ser Ala Ala Ser 100 105 110

- Val Ala Ser Thr Ala Ile Ala Ala Ala Gln Trp Ala Ile Ser Gln Ala 115 120 125
- Ser Gln Gly Glu Gly Thr Trp Ala Thr Ser Glu Glu Pro Pro Val 130 135 140
- Asp Tyr Ser Tyr Tyr Gln Gln Asp Glu Gly Tyr Gly Asn Ser Gln Gly 145 150 155 160
- Thr Glu Ser Ser Leu Tyr Ala His Gly Tyr Leu Lys Gly Thr Lys Gly
 165 170 175
- Pro Gly Ile Thr Gly Thr Lys Gly Asp Pro Thr Gly Ala Gly Pro Glu 180 185 190
- Ala Ser Leu Glu Pro Gly Ala Asp Ser Val Ser Met Gln Ala Phe Ser 195 200 205
- Arg Ala Gln Pro Gly Ala Ala Pro Gly Ile Tyr Gln Gln Ser Ala Glu 210 215 220
- Ala Ser Ser Ser Gln Gly Thr Ala Ala Asn Ser Gln Ser Tyr Thr Ile
 225 230 235 240
- Met Ser Pro Ala Val Leu Lys Ser Glu Leu Gln Ser Pro Thr His Pro 245 250 255
- Ser Ser Ala Leu Pro Pro Ala Thr Ser Pro Thr Ala Gln Glu Ser Tyr 260 265 270
- Ser Gln Tyr Pro Val Pro Asp Val Ser Thr Tyr Gln Tyr Asp Glu Thr 275 280 285
- Ser Gly Tyr Tyr Asp Pro Gln Thr Gly Leu Tyr Tyr Asp Pro Asn 290 295 300
- Ser Gln Tyr Tyr Tyr Asn Ala Gln Ser Gln Gln Tyr Leu Tyr Trp Asp 305 310 315 320
- Gly Glu Arg Arg Thr Tyr Val Pro Ala Leu Glu Gln Ser Ala Asp Gly 325 330 335
- His Lys Glu Thr Gly Ala Pro Ser Lys Glu Gly Lys Glu Lys Lys Glu 340 345 350
- Lys His Lys Thr Lys Thr Ala Gln Gln Ile Ala Lys Asp Met Glu Arg 355 360 365

| тгр | 370 | Arg | ser | Leu | ASN | 375 | GIN | rys | GIU | ASN | 380 | ьуs | ASN | ser | Pne |
|------------|------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Gln 385 | Pro | Ile | Ser | Ser | Leu 390 | Arg | Asp | Asp | Glu | Arg 395 | Arg | Glu | Ser | Ala | Thr 400 |
| Ala | Asp | Ala | Gly | Туг 405 | Ala | Ile | Leu | Glu | Lys 410 | Lys | Gly | Ala | Leu | Ala 415 | Glu |
| Arg | Gln | His | Thr 420 | Ser | Met | Asp | Leu | Pro 425 | Lys | Leu | Ala | Ser | Asp 430 | Asp | Arg |
| Pro | Ser | Pro 435 | Pro | Arg | Xaa | Leu | Val 440 | Ala | Ala | Tyr | Ser | Gly 445 | Glu | Ser | Asp |
| Ser | Glu 450 | Glu | Glu | Gln | Glu | Arg 455 | Gly | Gly | Pro | Glu | Arg 460 | Glu | Glu | Lys | Leu |
| Thr 465 | Asp [°] | Trp | Gln | Lys | Leu 470 | Ala | Cys | Leu | Leu | Cys 475 | Arg | Arg | Gln | Phe | Pro 480 |
| Ser | Lys | Glu | Ala | Leu 485 | Ile | Arg | His | Gln | Gln 490 | Leu | Ser | Gly | Leu | His 495 | Lys |
| | | | 500 | | His | | | 505 | | | | | 510 | | |
| | | 515 | | | Asn | | 520 | | | | | 525 | | | |
| | 530 | | | | Glu | 535 | | | | | 540 | | | | |
| 545 | | | | | Gly 550 | | | | | 555 | | | | | 560 |
| | | | | 565 | Gly | | | | 570 | | | | | 575 | |
| | | | 580 | | Trp | | | 585 | | | | | 590 | | |
| | | 595 | | | Pro | | 600 | | | | | 605 | | | |
| | 610 | | | | Gly | 615 | | | | | 620 | | | | |
| Tyr 625 | Lys | Glu | Thr | Leu | His 630 | Lys | Thr | Met | Val | Thr 635 | Arg | Phe | Asn | Glu | Ala 640 |

Gln

<210> 653 <211> 516 <212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (1)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (247)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 653

Xaa Thr Arg Pro Gly Arg Gln Thr Arg Leu Cys Arg Pro Ala Ile Ser 1 5 10 15

Leu Leu Trp Leu Val Thr Pro Gly Val Pro Ala Phe Ser Gly Trp Gly 20 25 30

Arg Arg His Arg Gly Arg Thr Gly Arg Arg Ala Met Ala Ser Cys Val 35 40 45

Gly Ser Arg Thr Leu Ser Lys Asp Asp Val Asn Tyr Lys Met His Phe 50 55 60

Arg Met Ile Asn Glu Gln Gln Val Glu Asp Ile Thr Ile Asp Phe Phe 65 70 75 80

Tyr Arg Pro His Thr Ile Thr Leu Leu Ser Phe Thr Ile Val Ser Leu 85 90 95

Met Tyr Phe Ala Phe Thr Arg Asp Asp Ser Val Pro Glu Asp Asn Ile 100 105 110

Trp Arg Gly Ile Leu Ser Val Ile Phe Phe Leu Ile Ile Ser Val 115 120 125

Leu Ala Phe Pro Asn Gly Pro Phe Thr Arg Pro His Pro Ala Leu Trp 130 135 140

Arg Met Val Phe Gly Leu Ser Val Leu Tyr Phe Leu Phe Leu Val Phe 145 150 155 160

| Leu | Leu | Phe | Leu | Asn 165 | Phe | Glu | Gln | Val | Lys 170 | Ser | Leu | Met | Tyr | Trp 175 | Leu |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Asp | Pro | Asn | Leu 180 | Arg | Tyr | Ala | Thr | Arg 185 | Glu | Ala | Asp | Val | Met 190 | Glu | Tyr |
| Ala | Val | Asn 195 | Cys | His | Val | Ile | Thr 200 | Trp | Glu | Arg | Ile | 11e 205 | Ser | His | Phe |
| Asp | 11e 210 | Phe | Ala | Phe | Gly | His 215 | Phe | Trp | Gly | Trp | Ala 220 | Met | Lys | Ala | Leu |
| Leu 225 | Ile | Arg | Ser | Tyr | Gly 230 | Leu | Cys | Trp | Thr | 11e 235 | Ser | Ile | Thr | ·Trp | Glu 240 |
| Leu | Thr | Glu | Leu | Phe 245 | Phe | Xaa | His | Leu | Leu 250 | Pro | Asn | Phe | Ala | Glu 255 | Cys |
| Trp | Trp | Asp | Gln 260 | Val | lle | Leu | Asp | Ile 265 | Leu | Leu | Cys | Asn | Gly 270 | Gly | Gly |
| Ile | Trp | Leu 275 | Gly | Met | Val | Val | Cys 280 | Arg | Phe | Leu | Glu | Met 285 | Arg | Thr | туг |
| His | Trp 290 | Ala | Ser | Phe | Lys | Asp 295 | Ile | His | Thr | Thr | Thr 300 | Gly | Lys | Ile | Lys |
| Arg 305 | Ala | Val | Leu | Gln | Phe 310 | Thr | Pro | Ala | Ser | Trp 315 | Thr | Tyr | Val | Arg | Trp 320 |
| Phe | Asp | Pro | Lys | Ser 325 | Ser | Phe | Gln | Arg | Val 330 | Ala | Gly | Val | Tyr | Leu 335 | Phe |
| Met | Ile | Ile | Trp 340 | Gln | Leu | Thr | Glu | Leu 345 | Asn | Thr | Phe | Phe | Leu 350 | Lys | His |
| Ile | Phe | Val 355 | Phe | Gln | Ala | Ser | His 360 | Pro | Leu | Ser | Trp | Gly 365 | Arg | Ile | Leu |
| Phe | Ile 370 | Gly | Gly | Ile | Thr | Ala 375 | Pro | Thr | Val | Arg | Gln 380 | Tyr | Tyr | Ala | Tyr |
| Leu 385 | Thr | Asp | Thr | Gln | Cys 390 | Lys | Arg | Val | Gly | Thr 395 | Gln | Cys | Trp | Val | Phe 400 |
| Gly | Val | Ile | Gly | Phe 405 | Leu | Glu | Ala | Ile | Val 410 | Cys | Ile | Lys | Phe | Gly 415 | Gln |
| Asp | Leu | Phe | Ser 420 | Lys | Thr | Gln | Ile | Leu 425 | Tyr | Val | Val | Leu | Trp 430 | Leu | Leu |

Cys Val Ala Phe Thr Thr Phe Leu Cys Leu Tyr Gly Met Ile Trp Tyr 435 440 445

618

PCT/US00/05881

Ala Glu His Tyr Gly His Arg Glu Lys Thr Tyr Ser Glu Cys Glu Asp 450 455 460

Gly Thr Tyr Ser Pro Glu Ile Ser Trp His His Arg Lys Gly Thr Lys 465 470 475 480

Gly Ser Glu Asp Ser Pro Pro Lys His Ala Gly Asn Asn Glu Ser His
485 490 495

Ser Ser Arg Arg Asn Arg His Ser Lys Ser Lys Val Thr Asn Gly
500 505 510

Val Gly Lys.Lys 515

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<210> 654

<211> 663

<212> PRT

<213> Homo sapiens

<400> 654

Leu Glu Cys Arg Glu Ala His Ile Arg Asp Val Pro Val Val Arg Leu
1 5 10 15

Pro Ala Asp Ser Pro Ile Pro Glu Arg Gly Asp Leu Ser Cys Arg Met
20 25 30

His Thr Cys Phe Asp Val Tyr Arg Cys Gly Phe Asn Pro Lys Asn Lys 35 40 45

Ile Lys Val Tyr Ile Tyr Ala Leu Lys Lys Tyr Val Asp Asp Phe Gly 50 60

Val Ser Val Ser Asm Thr Ile Ser Arg Glu Tyr Asm Glu Leu Leu Met 65 70 75 80

Ala Ile Ser Asp Ser Asp Tyr Tyr Thr Asp Asp Ile Asn Arg Ala Cys
85 90 95

Leu Phe Val Pro Ser Ile Asp Val Leu Asn Gln Asn Thr Leu Arg Ile 100 105 110

Lys Glu Thr Ala Gln Ala Met Ala Gln Leu Ser Arg Trp Asp Arg Gly
115 120 125

Thr Asn His Leu Leu Phe Asn Met Leu Pro Gly Gly Pro Pro Asp Tyr

| | 130 | | | | | 133 | | | | | 140 | | | | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Asn 145 | Thr | Ala | Leu | Asp | Val 150 | Pro | Arg | Asp | Arg | Ala 155 | Leu | Leu | Ala | Gly | Gly 160 |
| Gly | Phe | Ser | Thr | Trp 165 | Thr | туr | Arg | Gln | Gly 170 | Tyr | Asp | Val | Ser | 11e 175 | Pro |
| Val | Tyr | Ser | Pro 180 | Leų | Ser | Ala | Glu | Val 185 | Asp | Leu | Pro | Glu | Lys 190 | Gly | Pro |
| Gly | Pro | Arg 195 | Gln | туr | Phe | Leu | Leu 200 | Ser | Ser | Gln | Val | Gly 205 | Leu | His | Pro |
| Glu | Туг 210 | Arg | Glu | Asp | Leu | Glu 215 | Ala | Leu | Gln | Val | Lys 220 | His | Gly | Glu | Ser |
| Val 225 | Leu | Val | Leu | Asp | Lys 230 | Cys | Thr | Asn | Leu | Ser 235 | Glu | Gly | Val | Leu | Ser 240 |
| Val | Arg | Lys | Arg | Cys 245 | His | Lys | His | Gln | Val 250 | Phe | Asp | Tyr | Pro | Gln 255 | Val |
| Leu | Gln | Glu | Ala 260 | Thr | Phe | Cys | Val | Val 265 | Leu | Arg | Gly | Ala | Arg 270 | Leu | Gly |
| Gln | Ala | Val 275 | Leu | Ser | Asp | Val | Leu 280 | Gln | Ala | Gly | Cys | Val 285 | Pro | Val | Val |
| Ile | Ala 290 | Asp | Ser | Tyr | Ile | Leu 295 | Pro | Phe | Ser | Glu | Val 300 | Leu | Asp | Trp | Lys |
| Arg 305 | Ala | Ser | Val | Val | Val 310 | Pro | Glu | Glu | Lys | Met 315 | Ser | Asp | Val | туr | Ser 320 |
| Ile | Leu | Gln | Ser | Ile 325 | Pro | Gln | Arg | Gln | 11e 330 | Glu | Glu | Met | Gln | Arg 335 | Gln |
| Ala | Arg | Trp | Phe 340 | Trp | Glu | Ala | Туr | Phe 345 | Gln | Ser | Ile | Lys | Ala 350 | Ile | Ala |
| Leu | Ala | Thr 355 | Leu | Gln | Ile | Ile | Asn 360 | Asp | Arg | Ile | Tyr | Pro 365 | Tyr | Ala | Ala |
| Ile | Ser 370 | Tyr | Glu | Glu | Trp | Asn 375 | Asp | Pro | Pro | Ala | Val 380 | Lys | Trp | Gly | Ser |
| Val 385 | Ser | Asn | Pro | Leu | Phe 390 | Leu | Pro | Leu | Ile | Pro 395 | Pro | Gln | Ser | Gln | Gly 400 |
| Phe | Thr | Ala | Ile | Val | Leu | Thr | туr | Asp | Arg | Val | Glu | Ser | Leu | Phe | Arg |

| | | | | 405 | | | | | 410 | | | | | 415 | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-------------|------------|------------|------------|
| Val | Ile | Thr | Glu 420 | Val | Ser | Lys | Val | Pro 425 | Ser | Leu | Ser | Lys | Leu 430 | Leu | Val |
| Val | Trp | Asn 435 | Asn | Gln | Ąsn | Lys | Asn 440 | Pro | Pro | Glu | Asp | Ser 445 | Leu | Trp | Pro |
| Lys | Ile 450 | Arg | Val | Pro | Leu | Lys 455 | Val | Val | Arg | Thr | Ala 460 | Gl u | Asn | Lys | Leu |
| Ser 465 | Asn | Arg | Phe | Phe | Pro 470 | Tyr | Asp | Glu | Ile | Glu 475 | Thr | Glu | Ala | Val | Leu 480 |
| Ala | Ile | Asp | Asp | Asp 485 | Ile | Ile | Met | Leu | Thr 490 | Ser | Asp | Glu | Leu | Gln 495 | Phe |
| Gly | Tyr | Glu | Val 500 | Trp | Arg | Glu | Phe | Pro 505 | Asp | Arg | Leu | Val | Gly 510 | Tyr | Pro |
| Gly | Arg | Leu 515 | His | Leu | Trp | Asp | His 520 | Glu | Met | Asn | Lys | Trp 525 | Lys | Tyr | Glu |
| Ser | Glu 530 | Trp | Thr | Asn | Glu | Val 535 | Ser | Met | Val | Leu | Thr 540 | Gly | Ala | Ala | Phe |
| Tyr 545 | His | Lys | Tyr | Phe | Asn 550 | Tyr | Leu | Tyr | Thr | Tyr 555 | Lys | Met | Pro | Gly | Asp 560 |
| Ile | Lys | Asn | Trp | Val 565 | Asp | Ala | His | Met | Asn 570 | Cys | Glu | Asp | Ile | Ala 575 | Met |
| | Phe | | 580 | | | | | 585 | | | | | 590 | | |
| | Arg | 595 | - | | - | - | 600 | | - | | | 605 | • | - | |
| | Leu 610 | - | | | | 615 | | | | | 620 | - | | | - |
| Phe 625 | Ala | Ser | Val | Phe | 630 | Thr | Met | Pro | Leu | Lys 635 | Val | Val | Glu | His | Arg 640 |
| | Asp | | | 645 | | _ | Asp | Asp | Phe 650 | Pro | Glu | .Lys | Leu | Lys 655 | Ser |
| Phe | Pro | Asn | He | Gly | Ser | Leu | | | | | | | | | |

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<210> 655
<211> 97
<212> PRT
<213> Homo sapiens
<220>
<221> SITE
<222> (38)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (91)
<223> Xaa equals any of the naturally occurring L-amino acids
<400> 655
Ala Thr Gln Leu Leu Ser Ser Phe Ser Val Gly Pro Leu Leu Gln Ile
 1
                                     10
Thr Phe Tyr Glu Asp Lys Asn Phe Gln Gly Arg Arg Tyr Asp Cys Asp
Cys Asp Cys Ala Asp Xaa His Thr Tyr Leu Ser Arg Cys Asn Ser Ile
                             40
Lys Val Glu Gly Gly Thr Trp Ala Val Tyr Glu Arg Pro Asn Phe Ala
Gly Tyr Met Tyr Ile Leu Pro Gln Gly Glu Tyr Pro Glu Tyr Gln Arg
Trp Met Gly Leu Asn Asp Arg Leu Ser Ser Xaa Arg Ala Val Ser Ser
Ala
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<210> 656

<211> 167

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (59)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE <222> (73) <223> Xaa equals any of the naturally occurring L-amino acids Asp Ala Asp Leu Val Ile Trp Asp Pro Asp Ser Val Lys Thr Ile Ser Ala Lys Thr His Asn Ser Ser Leu Glu Tyr Asn Ile Phe Glu Gly Met 25 Glu Cys Arg Gly Ser Pro Leu Val Val Ile Ser Gln Gly Lys Ile Val 35 40 Leu Glu Asp Gly Thr Leu His Val Thr Glu Xaa Ser Gly Arg Tyr Ile 55 Pro Arg Lys Pro Phe Pro Asp Phe Xaa Tyr Lys Arg Ile Lys Ala Arg 70 75 Ser Arg Leu Ala Glu Leu Arg Gly Val Pro Arg Gly Leu Tyr Asp Gly 85 90 . Pro Val Cys Glu Val Ser Val Thr Pro Lys Thr Val Thr Pro Ala Ser 105 Ser Ala Lys Thr Ser Pro Ala Lys Gln Gln Ala Pro Pro Val Arg Asn 115 120 125 Leu His Gln Ser Gly Phe Ser Leu Ser Gly Ala Gln Ile Asp Asp Asn 135 Ile Pro Arg Arg Thr Thr Gln Arg Ile Val Ala Pro Pro Gly Gly Arg 150 155 Ala Asn Ile Thr Ser Leu Gly 165

<210> 657

<211> 176

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (1)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

623

<221> SITE

<222> (6)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (26)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 657

Ser Arg Thr Ser Gly Ser Pro Gly Leu Xaa Glu Phe Gly Thr Ser Ala 20 25 30

Val Leu Leu Arg Leu Gly Asp Glu Leu Glu Met Ile Arg Pro Ser Val 35 40 45

Tyr Arg Asn Val Ala Arg Gln Leu His Ile Ser Leu Gln Ser Glu Pro
50 55 60

Val Val Thr Asp Ala Phe Leu Ala Val Ala Gly His Ile Phe Ser Ala 65 70 75 80

Gly Ile Thr Trp Gly Lys Val Val Ser Leu Tyr Ala Val Ala Ala Gly \$85\$ 90 95

Leu Ala Val Asp Cys Val Arg Gln Ala Gln Pro Ala Met Val His Ala 100 105 110

Leu Val Asp Cys Leu Gly Glu Phe Val Arg Lys Thr Leu Ala Thr Trp 115 120 125

Leu Arg Arg Gly Gly Trp Thr Asp Val Leu Lys Cys Val Val Ser 130 135 140

Thr Asp Pro Gly Leu Arg Ser His Trp Leu Val Ala Ala Leu Cys Ser 145 150 155 160

Phe Gly Arg Phe Leu Lys Ala Ala Phe Phe Val Leu Leu Pro Glu Arg 165 170 175

<210> 658

<211> 137

<212> PRT

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<213> Homo sapiens
<220>
<221> SITE
<222> (75)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (91)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (101)
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<222> (124)
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<221> SITE
<222> (131)
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<400> 658
Gly Pro Val Gly Ser Ser Ser Glu Ala Pro Arg Gly Ala Gly Asp Ala
 1
                                     10
Gly Met Ala Gly Glu Leu Thr Pro Glu Glu Glu Ala Gln Tyr Lys Lys
                                 25
Ala Phe Ser Ala Val Asp Thr Asp Gly Asn Gly Thr Ile Asn Ala Gln
                             40
                                                 45
Glu Leu Gly Ala Ala Leu Lys Ala Thr Gly Lys Asn Leu Ser Glu Ala
                         55
Gln Leu Arg Lys Leu Ile Ser Glu Val Asp Xaa Asp Gly Asp Gly Glu
                    70
Ile Ser Phe Gln Glu Phe Leu Thr Ala Ala Xaa Lys Ala Arg Ala Gly
                 85
                                     90
```

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625

Leu Glu Asp Leu Xaa Val Ala Phe Arg Ala Phe Asp Gln Asp Gly Asp 100 105 Gly His Ile Thr Val Asp Glu Leu Arg Arg Ala Xaa Ala Gly Leu Gly 120 Xaa Leu Xaa Glu Ile Asp His Phe Gly 135 <210> 659 <211> 34 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (2) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (28) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (30) <223> Xaa equals any of the naturally occurring L-amino acids <400> 659 Pro Xaa Ser Arg Gln Asp Val Met Asp Ile Val Phe Ile Glu Gln Leu 10 Ser Val Ile Thr Thr Ile Gly Val Tyr Asp Trp Xaa Gln Xaa Ser Asn 20 25 Arg Ser <210> 660 <211> 56 <212> PRT <213> Homo sapiens <400> 660

Asn Pro Ile Ser Pro Lys Asn Tyr Lys Lys Ile Ser Gln Ala Gln Ser

626

Gln Leu Pro Val Ile Pro Ala Thr Gln Glu Ala Glu Ser Gly Glu Ser 20 25 30

Leu Gly Pro Gly Ala Ala Glu Val Asn Ser Glu Pro Arg Leu His His 35 40 45

Arg Thr Pro Ala Trp Ile Thr Lys
50 55

<210> 661

<211> 41 ·

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (29)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (31)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (36)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (39)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 661

Tyr Ile Gly Phe Val Ile Leu Val Phe Phe Ala Ser Ser Tyr Val Lys
1 5 10 15

Glu Ile Asp Asn Lys Ile Leu Asn Asn Lys Lys Lys Xaa Lys Xaa Ser 20 25 30

Ser Lys Gly Xaa Val Ala Xaa Ala Ile 35 40

<210> 662

<211> 524

| <21 | 2> P | RT | | | | | | | | | | | | | |
|-------------|--------------|------|-------|------|------|----------|------|------|-------|------|------|------|------|-----|-------|
| <21 | 3> н | omo | sapi | ens | | | | | | | | | | | |
| <22 | | | | | | | | | | | | | | | |
| | 1> S | | | | | | | | | | | | | | |
| | 2> (| • | 1 | | | 44- | | | · · · | | | | | | |
| ~22 | 3/ X | aa e | quai | s an | у ог | tne | nati | uraı | та о | ccur | rıng | L-a | mıno | ac1 | ds |
| <22 | - | | | | | | | | | | | | | | |
| | 1> S | | | | | | | | | | | | | | |
| | 2> (3> v | | ~ a 1 | | | . | | | 1 | | _: | 7 - | _: | : | |
| \ 22 | J- X | aa e | quai | s an | y or | tne | nati | uraı | ту о | ccur | ring | L-ai | mıno | acı | as |
| <40 | 0> 6 | 62 | | | | | | | | | | | | | |
| Cys | Glu | Ala | Trp | Arg | Gly | Arg | Ala | Asp | Pro | Gly | Gly | Gln | Ser | Cys | Leu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Gln | Ala | Leu | Gln | Asn | Ser | Thr | Ala | Pro | Gln | His | Pro | Glv | Leu | His | Ara |
| | | | 20 | | | | | 25 | | | | 1 | 30 | | 9 |
| | | | | | | | | | | | | | | | |
| Trp | Thr | | Asp | Arg | Lys | Met | | Pro | Arg | Arg | Asp | _ | Gly | Cys | Asp |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Pro | Val | Glv | Asn | Ile | Pro | Gln | Glv | Glu | Ser | Glv | Glv | Tro | Tro | Pro | Glu |
| | 50 | | | | | 55 | | | | 1 | 60 | | | | |
| | | | | | | | | | | | | | | | |
| | Ala | Gly | Asp | Leu | | Gly | Ala | Thr | Pro | | Arg | Glu | Ser | Pro | Gln |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Leu | Pro | Glv | Gln | Arg | Leu | Gln | Pro | His | Pro | Gln | Gln | Cvs | ī.eu | His | Glv |
| | | 2 | | 85 | | | | | 90 | | | -,- | | 95 | O L J |
| | | | | | | | | | | | | | | | |
| Arg | Arg | Val | | Gly | Pro | Ser | Trp | | Val | Glu | Ala | Trp | - | Pro | Gly |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Leu | His | Val | Phe | Gly | Pro | Glv | Gln | Ara | Trp | Glv | Xaa | Ser | Pro | Gln | Glv |
| | | 115 | | • | | • | 120 | | | 1 | | 125 | | | 1 |
| | | | | | | | | | | | | | • | | |
| Ile | | Glu | Leu | Glu | Gln | | Asp | Pro | Pro | Glu | | Ala | Asp | Ser | Ser |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Gly | Arq | Val | Val | Arg | Glu | Lvs | Tro | Ser | Ala | Asp | Met | Trp | Ara | Leu | Glv |
| 145 | - | | | _ | 150 | • | • | | | 155 | | | , | | 160 |
| | | | | | | | | | | | | | | | |
| Cys | Leu | Ile | Trp | Glu | Val | Phe | Asn | Gly | | Leu | Pro | Arg | Ala | | Ala |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| Leu: | Arg | Asn | Pro | Gly | Lys | Ile | Pro | Lys | Thr | Leu | Val | Pro | His | Xaa | Cvs |
| | _ | | 180 | • | - | | | 185 | | | | | 190 | | - 1 - |

Lys Leu Val Gly Ala Asn Pro Lys Val Arg Pro Asn Pro Ala Arg Phe

| | | 195 | | | | | 200 | | | | | 205 | | | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-------------|------------|------------|
| Leu | Gln 210 | Asn | Cys | Arg | Ala | Pro 215 | Gly | Gly | Phe | Met | Ser 220 | Asn | Arg | Phe | Val |
| Glu 225 | Thr | Asn | Leu | Phe | Leu 230 | Glu | Glu | Ile | Gln | 11e 235 | Lys | Glu | Pro | Ala | Glu 240 |
| Lys | Gln | Lys | Phe | Phe 245 | Gln | Glu | Leu | Ser | Lys 250 | Ser | Leu | Asp | Ala | Phe 255 | Pro |
| Glu | Asp | Phe | Cys 260 | Arg | His | Lys | Val | Leu 265 | Pro | Gln | Leu | Leu | Thr 270 | Ala | Phe |
| Glu | Phe | Gly 275 | Asn | Ala | Gly | Ala | Val 280 | Val | Leu | Thr | Pro | Leu 285 | Phe | Lys | Val |
| Gly | Lys 290 | Phe | Leu | Ser | Ala | Glu 295 | Glu | Tyr | Gln | Gln | Lys 300 | Ile | Ile | Pro | Val |
| Val 305 | Val | Lys | Met | Phe | Ser 310 | Ser | Thr | Asp | Arg | Ala 315 | Met | Arg | Ile | Arg | Leu 320 |
| Leu | Gln | Gln | | Glu 325 | Gln | Phe | Ile | Gln | Туг 330 | Leu | Asp | Glu | Pro | Thr 335 | Val |
| Asn | Thr | Gln | 11e 340 | Phe | Pro | His | Val | Val 345 | His | Gly | Phe | Leu | Asp 350 | Thr | Asn |
| Pro | Ala | 11e 355 | Arg | Glu | Gln | Thr | Val 360 | Lys | Ser | Met | Leu | Leu 365 | Leu | Ala | Pro |
| Lys | Leu 370 | Asn | Glu | Ala | Asn | Leu 375 | Asn | Val | Glu | Leu | Met 380 | Lys | His | Phe | Ala |
| Arg 385 | Leu | Gln | Ala | Lys | Asp 390 | Glu | Gln | Gly | Pro | Ile 395 | Arg | Cys | Asn | Thr | Thr 400 |
| | | | | 405 | | | | _ | Leu 410 | | | | | 415 | |
| Arg | Val | Leu | Thr 420 | Ser | Ala | Phe | Ser | Arg 425 | Ala | Thr | Arg | Asp | Pro- 430 | Phe | Ala |
| Pro | Ser | Arg 435 | Val | Ala | Gly | Val | Leu 440 | Gly | Phe | Ala | Ala | Thr 445 | His | Asn | Leu |
| Tyr | Ser 450 | Met | Asn | Asp | Cys | Ala 455 | Gln | Lys | Ile | Leu | Pro 460 | Val | Leu | Cys | Gly |
| Leu | Thr | Val | Asp | Pro | Glu | Lys | Ser | Val | Arg | Asp | Gln | Ala | Phe | Lys | Ala |

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130

470 475 465 480 Phe Gly Ala Ser Cys Pro Asn Trp Ser Leu Cys Arg Arg Thr Arg Pro Ser Trp Arg Lys Trp Arg Arg Met Ser Met Gln Pro Pro Ala Leu Ala 505 Trp Glu Glu Pro Gln Leu Ala Gly Gln Ala Gly Pro <210> 663 <211> 272 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (29) <223> Xaa equals any of the naturally occurring L-amino acids Pro Thr Leu Asp Ser Ala Arg Ser Leu Ser Met Arg Ala Pro Ser Leu Thr Pro Ser Ala Ala Pro Leu Ser Thr Trp Pro Leu Xaa Ile Leu Val Arg Ser Gly His Asn Arg Ala Val Asp Trp Trp Ser Leu Gly Ala Leu 40 Met Tyr Asp Met Leu Thr Gly Ser Pro Pro Phe Thr Ala Glu Asn Arg Lys Lys Thr Met Asp Lys Ile Ile Arg Gly Lys Leu Ala Leu Pro Pro Tyr Leu Thr Pro Asp Ala Arg Asp Leu Val Lys Lys Phe Leu Lys Arg Asn Pro Ser Gln Arg Ile Gly Gly Pro Gly Asp Ala Ala Asp Val

Gln Arg His Pro Phe Phe Arg His Met Asn Trp Asp Asp Leu Leu Ala 115 120 125

Trp Arg Val Asp Pro Pro Phe Arg Pro Cys Leu Gln Ser Glu Glu Asp

140

Val Ser Gln Phe Asp Thr Arg Phe Thr Arg Gln Thr Pro Val Asp Ser 150 155 Pro Asp Asp Thr Ala Leu Ser Glu Ser Ala Asn Gln Ala Phe Leu Gly 170 Phe Thr Tyr Val Ala Pro Ser Val Leu Asp Ser Ile Lys Glu Gly Phe 185 Ser Phe Gln Pro Lys Leu Arg Ser Pro Arg Arg Leu Asn Ser Ser Pro 200 Arg Ala Pro Val Ser Pro Leu Lys Phe Ser Pro Phe Glu Gly Phe Arg Pro Ser Pro Ser Leu Pro Glu Pro Thr Glu Leu Pro Leu Pro Pro Leu 235 Leu Pro Pro Pro Pro Pro Ser Thr Thr Ala Pro Leu Pro Ile Arg Pro 250 Pro Ser Gly Thr Lys Lys Ser Lys Arg Gly Arg Gly Arg Pro Gly Arg 265

<210> 664

<211> 256

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (99)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 664

Gly Thr Arg Arg Glu Thr Trp Arg Pro Gly Ser Met Ala Gly Leu Glu
1 5 10 15

Leu Leu Ser Asp Gln Gly Tyr Arg Val Asp Gly Arg Arg Ala Gly Glu 20 25 30

Leu Arg Lys Ile Gln Ala Arg Met Gly Val Phe Ala Gln Ala Asp Gly
35 40 45

Ser Ala Tyr Ile Glu Gln Gly Asn Thr Lys Ala Leu Ala Val Tyr 50 60

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| Ala | Leu | Val | Asn | Cys 85 | Gln | Tyr | Ser | Ser | Ala 90 | Thr | Phe | Ser | Thr | Gly 95 | Glu |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Arg | Lys | Xaa | Arg 100 | Pro | His | Gly | Asp | Arg 105 | Lys | Ser | Cys | Glu | Met 110 | Gly | Leu |
| Gln | Leu | Arg 115 | Gln | Thr | Phe | Glu | Ala 120 | Ala | Ile | Leu | Thr | Gln 125 | Leu | His | Pro |
| Arg | Ser 130 | Gln | Ile | Asp | Ile | Tyr 135 | Val | Gln | Val | Leu | Gln 140 | Ala | Asp | Gly | Gly |
| Thr 145 | туг | Ala | Ala | Cys | Val 150 | Asn | Ala | Ala | Thr | Leu 155 | Ala | Val | Leu | Asp | Ala 160 |
| Gly | Ile | Pro | Met | Arg 165 | Asp | Phe | Val | Cys | Ala 170 | Cys | Ser | Ala | Gly | Phe 175 | Val |
| Asp | Gly | Thr | Ala 180 | Leu | Ala | Asp | Leu | Ser 185 | His | Val | Glu | Glu | Ala 190 | Ala | Gly |
| Gly | Pro | Gln 195 | Leu | Ala | Leu | Ala | Leu 200 | Leu | Pro | Ala | Ser | Gly 205 | Gln | Ile | Ala |

Leu Leu Glu Met Asp Ala Arg Leu His Glu Asp His Leu Glu Arg Val

Leu Glu Ala Ala Ala Gln Ala Ala Arg Asp Val His Thr Leu Leu Asp

Arg Val Val Arg Gln His Val Arg Glu Ala Ser Ile Leu Leu Gly Asp

220

235

250

215

230

245

Gly Pro His Glu Ile Arg Gly Ser Arg Ala Arg Ala Leu Pro Asp Arg

70

<210> 665

210

225

<211> 241

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (9)

<223> Xaa equals any of the naturally occurring L-amino acids

| <220 |)> | | | | | | | | | | | | | | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| <221 | l> S1 | TE | | | | | | | | | | | | | |
| <222 | ?> (1 | 122) | | | | | | | | | | | | | |
| <223 | 3> Xa | aa ec | quals | any | of | the | natu | rall | у ос | curi | ing | L-an | nino | acid | ls |
| <400 |)> 66 | 55 | | | | | | | | | | | | | |
| Pro 1 | Arg | Gly | Asp | Lys 5 | Ala | Arg | Thr | Xaa | Pro 10 | Pro | Ala | Ala | Ser | Ala 15 | Arg |
| Pro | Ser | Arg | Ser 20 | Lys | Arg | Gly | Gly | Glu 25 | Glu | Arg | Val | Leu | Glu 30 | Lys | Glu |
| Glu | Glu | Glu 35 | Asp | Asp | Asp | Glu | Asp 40 | Glu | Asp | Glu | Glu | Asp 45 | Asp | Val | Ser |
| Glu | Gly 50 | Ser | Glu | Val | Pro | Glu 55 | Ser | Asp | Arg | Pro | Ala 60 | Gly | Ala | Gln | His |
| His 65 | Gln | Leu | Asn | Gly | Glu 70 | Arg | Gly | Pro | Gln | Ser 75 | Ala | Lys | Glu | Arg | Val 80 |
| Lys | Glu | Trp | Thr | Pro 85 | Cys | Gly | Pro | His | Gln 90 | Gly | Gln | Asp | Glu | Gly 95 | Arg |
| Gly | Pro | Ala | Pro 100 | Gly | Ser | Gly | Thr | Arg 105 | Gln | Val | Phe | Ser | Met 110 | Ala | Ala |
| Met | Asn | Lys 115 | Glu | Gly | Gly | Thr | Ala 120 | Ser | Xaa | Ala | Thr | Gly 125 | Pro | Asp | Ser |
| Pro | Ser 130 | Pro | Val | Pro | Leu | Prò 135 | Pro | Gly | Lys | Pro | Ala 140 | Leu | Pro | Gly | Ala |
| Asp 145 | Gly | Thr | Pro | Phe | Gly 150 | Cys | Pro | Pro | Gly | Arg 155 | Lys | Glu | Lys | Pro | Ser 160 |
| Asp | Pro | Val | Glu | Trp 165 | Thr | Val | Met | Asp | Val 170 | Val | Glu | Tyr | Phe | Thr 175 | Glu |
| Ala | Gly | Phe | Pro 180 | Glu | Gln | Ala | Thr | Val 185 | Phe | Gln | Glu | Gln | Glu 190 | Ile | Asp |
| Gly | Lys | Ser 195 | Leu | Leu | Leu | Met | Gln 200 | Arg | Thr | Asp | Val | Leu 205 | Thr | Gly | Leu |
| Ser | 11e 210 | Arg | Leu | Gly | Pro | Ala 215 | Leu | Lys | Ile | Tyr | Glu 220 | His | His | Ile | Lys |
| Val 225 | Leu | Gln | Gln | Gly | His 230 | Phe | Glu | Asp | Asp | Asp 235 | Pro | Asp | Gly | Phe | Leu 240 |

633

Gly

<210> 666

<211> 131

<212> PRT

<213> Homo sapiens

<400> 666

Val Thr Gly Gly Gly Ala Val Leu Gly Ala Glu Ser His Ala Ser

1 5 10 15

Lys Asp Val Ala Ile Asp Met Met Asp Ser Arg Thr Ser Gln Gln Leu $20 \hspace{1cm} 25 \hspace{1cm} 30$

Gln Leu Ile Asp Glu Gln Asp Ser Tyr Ile Gln Ser Arg Ala Asp Thr 35 40 45

Met Gln Asn Ile Glu Ser Thr Ile Val Glu Leu Gly Ser Ile Phe Gln 50 55 60

Gln Leu Ala His Met Val Lys Glu Gln Glu Glu Thr Ile Gln Arg Ile 65 .70 .75 .80

Asp Glu Asn Val Leu Gly Ala Gln Leu Asp Val Glu Ala Ala His Ser 85 90 95

Glu Ile Leu Lys Tyr Phe Gln Ser Val Thr Ser Asn Arg Trp Leu Met 100 105 110

Val Lys Ile Phe Leu Ile Leu Ile Val Phe Phe Ile Ile Phe Val Val 115 120 125

Phe Leu Ala 130

<210> 667

<211> 652

<212> PRT

<213> Homo sapiens

<400> 667

Leu Ser Trp Asn Arg Tyr Thr Ser Val Ser Pro Leu His Arg Ser Leu
1 5 10 15

Gln Leu Pro Pro Arg Val Ser Gly Val Arg Cys Asp Gln Cys Ala Arg

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| | | | 20 | | | | | 25 | | | | | 30 | | |
|-----------|-----------|-----------|-----|-----------|-----------|-----------|-----------|-----|-----------|-----------|-----------|-----------|------|-----------|------------|
| Gly | Phe | Ser 35 | Gly | Ile | Phe | Pro | Ala 40 | Cys | His | Pro | Cys | His 45 | Ala | Cys | Phe |
| Gly | Asp 50 | Trp | Asp | Arg | Val | Val 55 | Gln | Asp | Leu | Ala | Ala 60 | Arg | Thr | Gln | Arg |
| Leu 65 | Glu | Gln | Arg | Ala | Gln 70 | Glu | Leu | Gln | Gln | Thr 75 | Gly | Val | Leu | Gly | Ala 80 |
| Phe | Glu | Ser | Ser | Phe 85 | Trp | His | Met | Gln | Glu 90 | Lys | Leu | Gly | Ile | Val 95 | Gln |
| | | | 100 | | Arg | | | 105 | | | | | 110 | | |
| | | 115 | | | Glu | | 120 | | | | | 125 | | | • |
| | 130 | | | | | 135 | | | | | 140 | | • | | Asn |
| 145 | | | | | 150 | | | | | 155 | | | | | Ala 160 |
| | | | | 165 | Arg | | | | 170 | | | | | 175 | |
| | | | 180 | | | | | 185 | | | | | 190 | | Ser |
| | | 195 | | | | | 200 | | | | | 205 | | | Val |
| | 210 | | | | | 215 | | | | | 220 | | | | Ala |
| 225 | | | | | 230 | | | | | 235 | | | | | Asn 240 |
| | | | | 245 | | | | | 250 | | | | | 255 | |
| | | | 260 | | | | | 265 | | | | | 270 | 1 | Cys |
| | | 275 | | | | | 280 | | | | | 285 | | | Gln |
| Pro | Arg | Cys | GLY | GIY | ren | ser | cys | ASI | GTA | WIG | . WIG | WIG | TIIT | . AIG | Asp |

| | 290 | | | | | 295 | | | | | 300 | | | | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Leu 305 | Ala | Leu | Gly | Arg | Ala 310 | Arg | His | Thr | Gln | Ala 315 | Glu | Leu | Gln | Arg | Ala 320 |
| Leu | Ala | Glu | Gly | Gly 325 | Ser | Ile | Leu | Ser | Arg 330 | Val | Ala | Glu | Thr | Arg 335 | Arg |
| Gln | Ala | Ser | Glu 340 | Ala | Gln | Gln | Arg | Ala 345 | Gln | Ala | Ala | Leu | Asp 350 | Lys | Ala |
| Asn | Ala | Ser 355 | Arg | Gly | Gln | Val | Glu 360 | Gln | Ala | Asn | Gln | Glu 365 | Leu | Gln | Glu |
| Leu | Ile 370 | Gln | Ser | Val | Lys | Asp 375 | Phe | Leu | Asn | Gln | Glu 380 | Gly | Ala | Asp | Pro |
| Asp 385 | Ser | Ile | Glu | Met | Val 390 | Ala | Thr | Arg | Val | Leu 395 | Glu | Leu | Ser | Ile | Pro 400 |
| Ala | Ser | Ala | Glu | Gln 405 | Ile | Gln | His | Leu | Ala 410 | Gly | Ala | Ile | Ala | Glu 415 | Arg |
| Val | Arg | Ser | Leu 420 | Ala | Asp | Val | Asp | Ala 425 | Ile | Leu | Ala | Arg | Thr 430 | Val | Gly |
| Asp · | Val | Arg 435 | Arg | Ala | Glu | Gln | Leu 440 | Leu | Gln | Asp | Ala | Arg 445 | Arg | Ala | Arg |
| Ser | Trp 450 | Ala | Glu | Asp | Glu | Lys 455 | Gln | Lys | Ala | Glu | Thr 460 | Val | Gln | Ala | Ala |
| Leu 465 | Glu | Glu | Ala | Gln | Arg 470 | Ala | Gln | Gly | Ile | Ala 475 | Gln | Gly | Ala | Ile | Arg 480 |
| Gly | Ala | Val | Ala | Asp 485 | Thr | Arg | Asp | Thr | Glu 490 | Gln | Thr | Leu | Tyr | Gln 495 | Val |
| Gln | Glu | Arg | Met 500 | Ala | Gly | Ala | Glu | Arg 505 | Ala | Leu | Ser | Ser | Ala 510 | Gly | Glu |
| Arg | Ala | Arg 515 | Gln | Leu | Asp | Ala | Leu 520 | Leu | Glu | Ala | Leu | Lys 525 | Leu | Lys | Arg |
| Ala | Gly 530 | Asn | Ser | Leu | Ala | Ala 535 | Ser | Thr | Ala | Glu | Glu 540 | Thr | Ala | Gly | Ser |
| Ala 545 | Gln | Gly | Arg | Ala | Gln 550 | Glu | Ala | Glu | Gln | Leu 555 | Leu | Arg | Gly | Pro | Leu 560 |
| Gly | Asp | Gln | Tyr | Gln | Thr | Val | Lys | Ala | Leu | Ala | Glu | Arg | Lys | Ala | Gln |

636

570 575 565 Gly Val Leu Ala Ala Gln Ala Arg Ala Glu Gln Leu Arg Asp Glu Ala 585 580 Arg Asp Leu Leu Gln Ala Ala Gln Asp Lys Leu Gln Arg Leu Gln Glu 600 Leu Glu Gly Thr Tyr Glu Glu Asn Glu Arg Ala Leu Glu Ser Lys Ala 615 Ala Gln Leu Asp Gly Leu Glu Ala Arg Met Arg Ser Val Leu Gln Ala 630 635 Ile Asn Leu Gln Val Gln Ile Tyr Asn Thr Cys Gln 650 645 <210> 668 <211> 406 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (84) <223> Xaa equals any of the naturally occurring L-amino acids <400> 668 Gly Ala Val Arg Ser Ser Cys Ala Glu Leu Gln Ala Arg Val Met Ala Ala Leu Arg Gln Pro Gln Val Ala Glu Cys Trp Pro Arg Pro Gly Glu 20 25 Pro Ser Gly Arg Ser Ser Gly Pro Ser Pro Ser Trp Pro Cys Gln Arg Arg Ala Ala Cys Asn Leu Ile Gly Glu His Thr Asp Tyr Asn Gln Gly 60 55 Leu Val Leu Pro Met Ala Leu Glu Leu Met Thr Val Leu Val Gly Ser 70 Pro Arg Lys Xaa Gly Leu Val Ser Leu Leu Thr Thr Ser Glu Gly Ala 90

Asp Glu Pro Gln Arg Leu Gln Phe Pro Leu Pro Thr Ala Gln Arg Ser

105

| Leu | Glu | Pro 115 | Gly | Thr | Pro | Arg | Trp 120 | Ala | Asn | Tyr | Val | Lys 125 | Gly | Val | Ile |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Gln | Туг 130 | туг | Pro | Ala | Ala | Pro 135 | Leu | Pro | Gly | Phe | Ser 140 | Ala | Val | Val | Val |
| Ser 145 | Ser | Val | Pro | Leu | Gly 150 | Gly | Gly | Leu | Ser | Ser 155 | Ser | Ala | Ser | Leu | Ġlu 160 |
| Val | Ala | Thr | туг | Thr 165 | Phe | Leu | Gln | Gln | Leu 170 | Суѕ | Pro | Asp | Ser | Gly 175 | Thr |
| Ile | Ala | Ala | Arg 180 | Ala | Gln | Val | Cys | Gln 185 | Gln | Ala | Glu | His | Ser 190 | Phe | Ala |
| Gly | Met | Pro 195 | Cys | Gly | Ile | Met | Asp 200 | Gln | Phe | Ile | Ser | Leu 205 | Met | Gly | Gln |
| Lys | Gly 210 | His | Ala | Leu | Leu | 11e 215 | Asp | Суѕ | Arg | Ser | Leu 220 | Glu | Thr | Ser | Leu |
| 225 | | | | | 230 | | | | | 235 | | | Asn | | 240 |
| Val | Arg | His | Ser | Leu 245 | Ala | Ser | Ser | Glu | Туг 250 | Pro | Val | Arg | Arg | Arg 255 | Gln |
| | | | 260 | | | | | 265 | | | | | Arg 270 | | |
| | | 275 | | | | | 280 | | | | | 285 | Lys | | |
| | 290 | | | | | 295 | | | | | 300 | | Thr | | |
| 305 | | | | | 310 | | | | | 315 | | | Gly | | 320 |
| Met | Val | Glu | Ser | His 325 | Arg | Ser | Leu | Arg | 330 | Asp | Tyr | Glu | Val | Ser 335 | Суѕ |
| | | | 340 | | | | | 345 | | | | | Pro 350 | - | |
| | | 355 | | | | | 360 | | | | | 365 | Thr | | |
| Leu | Leu 370 | Glu | Ala | Ser | Ala | Ala 375 | Pro | His | Ala | Met | Arg 380 | His | Ile | Gln | Glu |

638

His Tyr Gly Gly Thr Ala Thr Phe Tyr Leu Ser Gln Ala Ala Asp Gly 385 390 395 400

Ala Lys Val Leu Cys Leu 405

<210> 669

<211> 86

<212> PRT

<213> Homo sapiens

<400> 669

Pro Glu Pro Thr Val Val Met Ala Ala Arg Ala Leu Cys Met Leu Gly
1 5 10 15

Leu Val Leu Ala Leu Leu Ser Ser Ser Ser Ala Glu Glu Tyr Val Gly
20 25 30

Leu Ser Ala Asn Gln Cys Ala Val Pro Ala Lys Asp Arg Val Asp Cys 35 40 45

Gly Tyr Pro His Val Thr Pro Lys Glu Cys Asn Asn Arg Gly Cys Cys 50 55 60

Phe Asp Ser Arg Ile Pro Gly Val Pro Trp Cys Phe Lys Pro Leu Gln 65 70 75 80

Glu Ala Glu Cys Thr Phe 85

<210> 670

<211> 392

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (6)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 670

Gly Gly Ala Arg Xaa Ser Pro Ala Thr Gln Pro Pro Pro Leu Leu 1 5 10 15

Pro Pro Ser Ala Thr Gly Pro Asp Ala Thr Val Gly Gly Pro Ala Pro
20 25 30

| 1111 | PIO | 35 | Leu | FIG | FIO | 361 | 40 | 1111 | HIG | 361 | Vai | 45 | nec | GIU | 710 |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Glu | Asn 50 | Lys | туг | Leu | Pro | Glu 55 | Leu | Met | Ala | Glu | Lys 60 | Asp | Ser | Leu | Asp |
| Pro 65 | Ser | Phe | Thr | His | Ala 70 | Met | Gln | Leu | Leu | Thr 75 | Ala | Glu | Ile | Glu | Lys 80 |
| Ile | Gln | Lys | Gly | Asp 85 | Ser | Lys | Lys | Asp | Asp 90 | Glu | Glu | Asn | Tyr | Leu 95 | Asp |
| Leu | Phe | Ser | His 100 | Lys | Asn | Met | Lys | Leu 105 | Lys | Glu | Arg | Val | Leu 110 | Ile | Pro |
| Val | Lys | Gln 115 | Tyr | Pro | Lys | Phe | Asn 120 | Phe | Val | Gly | Lys | 11e 125 | Leu | Gly | Pro |
| | 130 | | | | - | 135 | | | | | 140 | - | | Lys | |
| Ser 145 | Val | Leu | Gly | Lys | Gly 150 | Ser | Met | Arg | Asp | Lys 155 | Ala | Lys | Glu | Glu | Glu 160 |
| Leu | Arg | Lys | Gly | Gly 165 | Asp | Pro | Lys | Tyr | Ala 170 | His | Leu | Asn | Met | Asp 175 | Leu |
| His | Val | Phe | Ile 180 | Glu | Val | Phe | Gly | Pro 185 | Pro | Cys | Glu | Ala | Туг 190 | Ala | Leu |
| Met | Ala | His 195 | Ala | Met | Glu | Glu | Val 200 | Lys | Lys | Phe | Leu | Val 205 | Pro | Asp | Met |
| | 210 | | | - | | 215 | | | | | 220 | | - | Leu | |
| 225 | | | | | 230 | | | | | 235 | | | | Gly | 240 |
| | | | | 245 | | | | | 250 | | | | | Val 255 | |
| | | | 260 | | | | | 265 | | | | | 270 | Ala | |
| | | 275 | | | | | 280 | - | | | | 285 | | Thr | |
| Arg | Gly 290 | Ala | Pro | Ala | Pro | Arg 295 | Ala | Arg | Thr | Ala | Gly 300 | Ile | Gln | Arg | Ile |

Pro Leu Pro Pro Pro Pro Ala Pro Glu Thr Tyr Glu Glu Tyr Gly Tyr 310 Asp Asp Thr Tyr Ala Glu Gln Ser Tyr Glu Gly Tyr Glu Gly Tyr Tyr 330 Ser Gln Ser Gln Gly Asp Ser Glu Tyr Tyr Asp Tyr Gly His Gly Glu 345 Val Gln Asp Ser Tyr Glu Ala Tyr Gly Gln Asp Asp Trp Asn Gly Thr 355 360 Arg Pro Ser Leu Lys Ala Pro Pro Ala Arg Pro Val Lys Gly Ala Tyr 380 375 Arg Glu His Pro Tyr Gly Arg Tyr 390 <210> 671 <211> 180 <212> PRT <213> Homo sapiens <400> 671 Arg Asn Met Ser Ser Phe Ser Arg Ala Pro Gln Gln Trp Ala Thr Phe 1 5 Ala Arg Ile Trp Tyr Leu Leu Asp Gly Lys Met Gln Pro Pro Gly Lys Leu Ala Ala Met Ala Ser Ile Arg Leu Gln Gly Leu His Lys Pro Val 40 Tyr His Ala Leu Ser Asp Cys Gly Asp His Val Val Ile Met Asn Thr 50 Arg His Ile Ala Phe Ser Gly Asn Lys Trp Glu Gln Lys Val Tyr Ser Ser His Thr Gly Tyr Pro Gly Gly Phe Arg Gln Val Thr Ala Ala Gln Leu His Leu Arg Asp Pro Val Ala Ile Val Lys Leu Ala Ile Tyr Gly 100 Met Leu Pro Lys Asn Leu His Arg Arg Thr Met Met Glu Arg Leu His

Leu Phe Pro Asp Glu Tyr Ile Pro Glu Asp Ile Leu Lys Asn Leu Val

641

130 135 140 Glu Glu Leu Pro Gln Pro Arg Lys Ile Pro Lys Arg Leu Asp Glu Tyr 150 155 Thr Gln Glu Glu Ile Asp Ala Phe Pro Arg Leu Trp Thr Pro Pro Glu 170 Asp Tyr Arg Leu 180 <210> 672 <211> 78 <212> PRT <213> Homo sapiens <400> 672 Glu Asn Tyr Gln Phe Thr Tyr Arg Arg Phe Phe Phe Pro Asn Ser Arg Phe His Pro Arg Pro Phe Glu Glu Leu Gln Thr Leu Ser Leu Arg Lys 20 Glu Arg Gly Gln Pro Lys Ile Asn Ala Lys Phe Ala Tyr Thr Pro Ser His Ser Asp Val Leu Val Val Thr Tyr Tyr Gln Cys Gly Arg Glu Pro 50 55 Lys Leu His Phe Arg Ser Lys Tyr Ser Leu Cys Arg Tyr Cys <210> 673 <211> 139 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (113) <223> Xaa equals any of the naturally occurring L-amino acids <220>

<223> Xaa equals any of the naturally occurring L-amino acids

<221> SITE <222> (132)

<400> 673 Pro Thr Arg Pro Pro Leu Cys Arg Gly Ala Ala Ser Arg Gly Leu Leu 10 Cys Lys Trp Ala Pro Trp Pro Ser Ala Pro Val Pro Ala Thr Arg Asp 25 20 Arg Ala Pro Arg Pro Ala Arg Gly Arg Arg Pro Gly Arg Leu Gly Ser 40 Thr Ser Ser Asn Ser Ser Cys Ser Ser Thr Glu Cys Pro Gly Glu Ala 55 Ile Pro His Pro Pro Gly Leu Pro Lys Ala Asp Pro Gly His Trp Trp 65 70 75 Ala Ser Phe Phe Phe Gly Lys Ser Thr Leu Pro Phe Met Ala Thr Val 90 Leu Glu Ser Ala Glu His Ser Glu Pro Pro Gln Ala Ser Ser Ser Met 105 Xaa Ala Cys Gly Leu Ala Arg Glu Ala Pro Arg Lys Gln Pro Gly Gly 115 120 125 Gln Ser Ser Xaa Ala Ser Ala Gly Pro Pro Ser 130 135 <210> 674 <211> 279 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (7) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (58) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (193)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 674

| Glu l | Arg | Ala | His | Ser 5 | Leu | Xaa | His | Gly | Val 10 | Asp | Gly | Glu | Pro | Cys 15 | Pro |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Glu | Asp | Tyr | Lys 20 | Tyr | Ile | Ser | Glu | Asn 25 | Cys | Glu | Thr | Ser | Thr 30 | Met | Asn |
| Ile | Asp | Arg 35 | Asn | Ile | Thr | His | Leu 40 | Gln | His | Cys | Thr | Phe 45 | Val | Asp | Asp |
| Cys | Ser 50 | Ser | Ser | Asn | Cys | Leu 55 | Cys | Gly | Xaa | Phe | Ser 60 | Ile | Arg | Cys | Trp |
| Tyr 65 | Asp | Lys | Asp | Gly | Arg 70 | Leu | Leu | Gln | Glu | Phe 75 | Asn | Lys | Ile | Glu | Pro 80 |
| Pro | Leu | Ile | Phe | Glu 85 | Cys | Asn | Gln | Ala | Cys 90 | Ser | Cys | Trp | Arg | Asn 95 | Суѕ |
| Lys | Asn | Arg | Val 100 | Val | Gln | Ser | Gly | 11e 105 | Lys | Val | Arg | Leu | Gln 110 | Leu | Tyr |
| Arg | Thr | Ala 115 | Lys | Met | Gly | Trp | Gly 120 | Val | Arg | Ala | Leu | Gln 125 | Thr | Ile | Pro |
| Gln | Gly 130 | Thr | Phe | Ile | Cys | Glu 135 | Tyr | Val | Gly | Glu | Leu 140 | Ile | Ser | Asp | Ala |
| Glu 145 | Ala | Asp | Val | Arg | Glu 150 | Asp | Asp | Ser | туr | Leu 155 | Phe · | Asp | Leu | Asp | Asn 160 |
| Lys | Asp | Gly | Glu | Val 165 | Tyr | Cys | Ile | Asp | Ala 170 | Arg | Tyr | Tyr | Gly | Asn 175 | Ile |
| Ser | Arg | Phe | Ile 180 | Asn | His | Leu | Cys | Asp 185 | Pro | Asn | Ile | Ile | Pro 190 | Val | Arg |
| Xaa | Phe | Met 195 | Leu | His | Gln | Asp | Leu 200 | Arg | Phe | Pro | Arg | 11e 205 | Ala | Phe | Phe |
| Ser | Ser 210 | Arg | Asp | Ile | Arg | Thr 215 | Gly | Glu | Glu | Leu | Gly 220 | Phe | Asp | Tyr | Gly |
| Asp 225 | Arg | Phe | Trp | Asp | Ile 230 | Lys | Ser | Lys | Tyr | Phe 235 | Thr | Суѕ | Gln | Суѕ | Gly 240 |
| Ser | Glu | Lys | Cys | Lys 245 | His | Ser | Ala | Glu | Ala 250 | Ile | Ala | Leu | Glu | Gln 255 | Ser |
| Arg | Leu | Ala | Arg 260 | Leu | Asp | Pro | His | Pro 265 | Glu | Leu | Leu | Pro | Glu 270 | Leu | Gly |

WO 00/55173

644

Ser Leu Pro Pro Val Asn Thr 275

<210> 675

<211> 405

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (393)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (394)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 675

Arg Asn Thr Leu Gly Arg Gly Thr Thr Ile Thr Leu Val Leu Lys Glu
1 5 10 15

Glu Ala Ser Asp Tyr Leu Glu Leu Asp Thr Ile Lys Asn Leu Val Lys
20 25 30

Lys Tyr Ser Gln Phe Ile Asn Phe Pro Ile Tyr Val Trp Ser Ser Lys 35 40 45

Thr Glu Thr Val Glu Glu Pro Met Glu Glu Glu Glu Ala Ala Lys Glu
50 60

Glu Lys Glu Glu Ser Asp Asp Glu Ala Ala Val Glu Glu Glu Glu Glu 65 70 75 80

Glu Lys Lys Pro Lys Thr Lys Lys Val Glu Lys Thr Val Trp Asp Trp
85 90 95

Glu Leu Met Asn Asp Ile Lys Pro Ile Trp Gln Arg Pro Ser Lys Glu 100 105 110

Val Glu Glu Asp Glu Tyr Lys Ala Phe Tyr Lys Ser Phe Ser Lys Glu 115 120 125

Ser Asp Asp Pro Met Ala Tyr Ile His Phe Thr Ala Glu Gly Glu Val 130 135 140

Thr Phe Lys Ser Ile Leu Phe Val Pro Thr Ser Ala Pro Arg Gly Leu 145 150 155 160

| Phe | Asp | Glu | Tyr | Gly 165 | Ser | Lys | Lys | Ser | Asp 170 | Tyr | Ile | Lys | Leu | Tyr 175 | Val |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Arg | Arg | Val | Phe 180 | Ile | Thr | Asp | Asp | Phe 185 | His | Asp | Met | Met | Pro 190 | Lys | Tyr |
| Leu | Asn | Phe 195 | Val | Lys | Gly | Val | Val 200 | Asp | Ser | Asp | Asp | Leu 205 | Pro | Leu | Asn |
| Val | Ser 210 | Arg | Glu | Thr | Leu | Gln 215 | Gln | His | Lys | Leu | Leu 220 | Lys | Val | Ile | Arg |
| Lys 225 | Lys | Leu | Val | Arg | Lys 230 | Thr | Leu | Asp | Met | 11e 235 | Lys | Lys | Ile | Ala | Asp 240 |
| Asp | Lys | Tyr | Asn | Asp 245 | Thr | Phe | Trp | Lys | Glu 250 | Phe | Gly | Thr | Asn | 11e 255 | Lys |
| Leu | Gly | Val | Ile 260 | Glu | Asp | His | Ser | Asn 265 | Arg | Thr | Arg | Leu | Ala 270 | Lys | Leu |
| Leu | Arg | Phe 275 | Gln | Ser | Ser | His | His 280 | Pro | Thr | Asp | Ile | Thr 285 | Ser | Leu | Asp |
| Gln | Туг 290 | Val | Glu | Arg | Met | Lys 295 | Glu | Lys | Gln | Asp | Lys 300 | Ile | Tyr | Phe | Met |
| Ala 305 | Gly | Ser | Ser | Arg | Lys 310 | Glu | Ala | Glu | Ser | Ser 315 | Pro | Phe | Val | Glu | Arg 320 |
| Leu | Leu | Lys | Lys | Gly 325 | Tyr | Glu | Val | Ile | Туг 330 | Leu | Thr | Glu | Pro | Val 335 | Asp |
| Glu | Tyr | Cys | Ile 340 | Gln | Ala | Leu | Pro | Glu 345 | Phe | Asp | Gly | Lys | Arg 350 | Phe | Gln |
| Asn | Val | Ala 355 | Lys | Glu | Gly | Val | Lys 360 | Phe | Asp | Glu | Ser | Glu 365 | Lys | Thr | Lys |
| Glu | Ser 370 | Arg | Glu | Ala | Val | Glu 375 | Lys | Glu | Phe | Glu | Pro 380 | Leu | Leu | Asn | Trp |
| Met 385 | Lys | Asp | Lys | Ala | Leu 390 | Lys | Gly | Xaa | Xaa | Leu 395 | Trp | Glu | Ile | Leu | Pro 400 |
| Ile | Cys | Gly | Lys | Tyr 405 | | | | | | | | | | | |

646

<211> 465 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (5) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (6) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (16) <223> Xaa equals any of the naturally occurring L-amino acids Asn Asp Ser Leu Xaa Xaa Lys Ala Gly Thr Pro Ala Gly Asn Arg Xaa 5 Gly Ile Pro Gly Ser Thr His Ala Ser Ala Ala Ala Pro Phe Ala Ala Ala Leu Ala Arg Asp Pro Asn Pro Ala Ser Pro Leu Pro Glu His Arg 35 40 Pro Arg Leu His Arg Gly Pro Gly Pro Pro Ala Arg Leu Ala Ala Ala Met Ala Asp Pro Lys Tyr Ala Asp Leu Pro Gly Ile Ala Arg Asn Glu 70 Pro Asp Val Tyr Glu Thr Ser Asp Leu Pro Glu Asp Asp Gln Ala Glu 85 Phe Asp Ala Glu Glu Leu Thr Ser Thr Ser Val Glu His Ile Ile Val 105 Asn Pro Asn Ala Ala Tyr Asp Lys Phe Lys Asp Lys Arg Val Gly Thr 120 Lys Gly Leu Asp Phe Ser Asp Arg Ile Gly Lys Thr Lys Arg Thr Gly 130 135 Tyr Glu Ser Gly Glu Tyr Glu Met Leu Gly Glu Gly Leu Gly Val Lys

Glu Thr Pro Gln Gln Lys Tyr Gln Arg Leu Leu His Glu Val Gln Glu

| | | | | 165 | | | | | 170 | | | | | 175 | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Leu | Thr | Thr | Glu 180 | Val | Glu | Lys | Ile | Lys 185 | Thr | Thr | Val | Lys | Glu 190 | Ser | Ala |
| Thr | Glu | Glu 195 | Lys | Leu | Thr | Pro | Val 200 | Leu | Leu | Ala | Lys | Gln 205 | Leu | Ala | Ala |
| Leu | Lys 210 | Gln | Gln | Leu | Val | Ala 215 | Ser | His | Leu | Glu | Lys 220 | Leu | Leu | Gly | Pro |
| Asp 225 | Ala | Ala | Ile | Asn | Leu 230 | Thr | Asp | Pro | Asp | Gly 235 | Ala | Leu | Ala | Lys | Arg 240 |
| Leu | Leu | Leu | Gln | Leu 245 | Glu , | Ala | Thr | Lys | Asn 250 | Ser | Lys | Gly | Gly | Ser 255 | Gly |
| Gly | Lys | Thr | Thr 260 | Gly | Thr | Pro | Pro | Asp 265 | Ser | Ser | Leu | Val | Thr 270 | Tyr | Glu |
| Leu | His | Ser 275 | Arg | Pro | Glu | Gln | Asp 280 | Lys | Phe | Ser | Gln | Ala 285 | Ala | Lys | Val |
| Ala | Glu 290 | Leu | Glu | Lys | Arg | Leu 295 | Thr | Glu | Leu | Glu | Thr 300 | Ala | Val | Arg | Суѕ |
| Asp 305 | Gln | Asp | Ala | Gln | Asn 310 | Pro | Leu | Ser | Ala | Gly 315 | Leu | Gln | Gly | Ala | Cys 320 |
| Leu | Met | Glu | Thr | Val 325 | Glu | Leu | Leu | Gln | Ala 330 | Lys | Val | Ser | Ala | Leu 335 | Asp |
| Leu | Ala | Val | Leu 340 | Asp | Gln | Val | Glu | Ala 345 | Arg | Leu | Gln | Ser | Val 350 | Leu | Gly |
| Lys | Val | Asn 355 | Glu | Ile | Ala | Lys | His 360 | Lys | Ala | Ser | Val | Glu 365 | Asp | Ala | Asp |
| Thr | Gln 370 | Ser | Lys | Val | His | Gln 375 | Leu | Tyr | Glu | Thr | 11e 380 | Gln | Arg | Trp | Ser |
| Pro 385 | Ile | Ala | Ser | Thr | Leu 390 | Pro | Glu | Leu | Val | Gln 395 | Arg | Leu | Val | Thr | 11e 400 |
| Lys | Gln | Leu | His | Glu 405 | Gln | Ala | Met | Gln | Phe 410 | Gly | Gln | Leu | Leu | Thr 415 | His |
| Leu | Asp | Thr | Thr 420 | Gln | Gln | Met | Ile | Ala 425 | Asn | Ser | Leu | Lys | Asp 430 | Asn | Thr |
| Thr | Leu | Leu | Thr | Gln | Val | Gln | Thr | Thr | Met | Arg | Glu | Asn | Leu | Ala | Thr |

648

435 440 445

Val Glu Gly Asn Phe Ala Ser Ile Asp Glu Arg Met Lys Lys Leu Gly 450 455 460

Lys

465

<210> 677

<211> 48

<212> PRT

<213> Homo sapiens

<400> 677

Ser Ser Phe Leu Asn Ser Asp Leu Gly Leu Ser Leu Ala Arg Asn Leu 1 5 10 15

Ala Phe Ser Phe Thr Thr Lys Glu Arg Asp Gln Lys Pro Leu Ile Phe 20 25 30

Asn Phe His Lys Met Leu Glu Val Tyr Ile Tyr Ile Tyr Ile Phe Leu 35 40 45

<210> 678

<211> 940

<212> PRT

<213> Homo sapiens

<400> 678

Val Leu Gly Glu Gly Ile Ser Phe Leu Leu Ser Pro Pro Leu Pro Thr 1 5 10 15

Pro Ser Ile Asn Ile Ile Leu Leu Lys Ile Leu Arg Cys Gln Ala Ala 20 25 30

Lys Val Glu Ser Ala Ile Ala Glu Gly Gly Ala Ser Arg Phe Ser Ala 35 40 45

Ser Ser Gly Gly Gly Ser Arg Gly Ala Pro Gln His Tyr Pro Lys
50 55 60

Thr Ala Gly Asn Ser Glu Phe Leu Gly Lys Thr Pro Gly Gln Asn Ala 65 70 75 80

| Gln | Lys | Trp | Ile | Pro 85 | Ala | Arg | Ser | Thr | Arg 90 | Arg | Asp | Asp | Asn | Ser 95 | Ala |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Ala | Asn | Asn | Ser 100 | Ala | Asn | Glu | Lys | Glu 105 | Arg | His | Asp | Ala | 11e 110 | Phe | Arg |
| Lys | Val | Arg 115 | Gly | Ile | Leu | Asn | Lys 120 | Leu | Thr | Pro | Glu | Lys 125 | Phe | Asp | Lys |
| Leu | Cys 130 | Leu | Glu | Leu | Leu | Asn 135 | Val | Gly | Val | Glu | Ser 140 | Lys | Leu | Ile | Leu |
| Lys 145 | Gly | Val | Ile | Leu | Leu 150 | Ile | Val | Asp | Lys | Ala 155 | Leu | Glu | Glu | Pro | Lys 160 |
| Tyr | Ser | Ser | Leu | Tyr 165 | Ala | Gln | Leu | Cys | Leu 170 | Arg | Leu | Ala | Glu | Asp 175 | Ala |
| Pro | Asn | Phe | Asp 180 | Gly | Pro | Ala | Ala | Glu 185 | Gly | Gln | Pro | Gly | Gln 190 | Lys | Gln |
| Ser | Thr | Thr 195 | Phe | Arg | Arg | Leu | Leu 200 | Ile | Ser | Lys | Leu | Gln 205 | Asp | Glu | Phe |
| | 210 | | | | Asn | 215 | | | | | 220 | | | | |
| 225 | | | | | Glu 230 | | | | | 235 | | | | | 240 |
| | | | | 245 | Phe | | | | 250 | | | | | 255 | |
| | | | 260 | | His | _ | - | 265 | _ | | | | 270 | - | - |
| | | 275 | | | Lys | _ | 280 | | | | | 285 | _ | | |
| Gln | 11e 290 | Met | Arg | Thr | Val | Gly 295 | Pro | Arg | Leu | Asp | His 300 | Glu | Arg | Ala | Lys |
| 305 | | | | | Туг 310 | | | | | 315 | | | | | 320 |
| | | | | 325 | Arg | | | | 330 | | | | | 335 | |
| Leu | Arg | Glu | His 340 | His | Trp | Val | Pro | Arg 345 | Lys | Ala | Phe | Leu | Asp 350 | Asn | Gly |

| Pro | Lys | Thr 355 | Ile | Asn | Gln | Ile | Arg 360 | Gln | Asp | Ala | Val | Lys 365 | Asp | Leu | Gly |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Val | Phe 370 | Ile | Pro | Ala | Pro | Met 375 | Ala | Gln | Gly | Met | Arg 380 | Ser | Asp | Phe | Phe |
| Leu 385 | Glu | Gly | Pro | Phe | Met 390 | Pro | Pro | Arg | Met | Lys 395 | Met | Asp | Arg | Asp | Pro 400 |
| Leu | Gly | Gly | Leu | Ala 405 | Asp | Met | Phe | Gly | Gln 410 | Met | Pro | Gly | Ser | Gly 415 | Ile |
| Gly | Thr | Gly | Pro 420 | Gly | Val | Ile | Gln | Asp 425 | Arg | Phe | Ser | Pro | Thr 430 | Met | Gly |
| _ | | 435 | | Asn | | | 440 | | _ | | | 445 | | | |
| | 450 | | | Ser | | 455 | | | | | 460 | | | | |
| 465 | | | | Ser | 470 | | | | | 475 | | | | | 480 |
| | | | | Gly 485 | | | • | | 490 | | | • | | 495 | • |
| | | | 500 | Asn | | | | 505 | ,,,, | | | | 510 | | |
| | | 515 | | Lys | | | 520 | | - | | | 525 | | | |
| | 530 | | | Ser | | 535 | | | | | 540 | | | | |
| 545 | | | | Gln | 550 | | | | | 555 | | | | | 560 |
| | | | | Lys 565 | | | | | 570 | | | | | 575 | |
| | | | 580 | Thr | | | | 585 | | | | | 590 | | |
| | | 595 | | Ala | | | 600 | | | | | 605 | | | |
| uis | Phe 610 | ren | PTO | Glu | met | Leu 615 | ser | rys | val | тте | 620 | ren | ser | reu | Asp |

| 625 | 501 | | 010 | | 630 | O1u | bys | ALG | DEL | 635 | Dea | 116 | 261 | Dea | 640 |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-------------|------------|------------|------------|------------|
| Lys | Gln | Glu | Gly | Ile 645 | Ala | Thr | Ser | Asp | Asn 650 | Phe | Met | Gln | Ala | Phe 655 | Leu |
| Asn | Val | Leu | Asp 660 | Gln | Cys | Pro | Lys | Leu 665 | Glu | Val | Asp | Ile | Pro 670 | Leu | Val |
| Lys | Ser | Туг 675 | Leu | Ala | Gln | Phe | Ala 680 | Ala | Arg | Ala | Ile | Ile 685 | Ser | Glu | Leu |
| Val | Ser 690 | Ile | Ser | Glu | Leu | Ala 695 | Gln | Pro | Leu | Glu | Ser 700 | Gly | Thr | His | Phe |
| Pro 705 | Leu | Phe | Leu | Leu | Cys 710 | Leu | Gln | Gln | Leu | Ala 715 | Lys | Leu | Gln | Asp | Arg 720 |
| Glu | Trp | Leu | Thr | Glu 725 | Leu | Phe. | Gln | Gln | Ser 730 | Lys | Val | Asn | Met | Gln 735 | Lys |
| Met | Leu | Pro | Glu 740 | Ile | Asp | Gln | Asn | Lys 745 | Asp | Arg | Met | Leu | Glu 750 | Ile | Leu |
| Glu | Gly | Lys 755 | Gly | Leu | Ser | Phe | Leu 760 | Phe | Pro | Leu | Leu | Lys 765 | Leu | Glu | Lys |
| Glu | Leu 770 | Leu | Lys | Gln | Ile | Lys 775 | Leu | Asp | Pro | Ser | P.ro 780 | Gln | Thr | Ile | Tyr |
| Lys 785 | Trp | Ile | Lys | Asp | Asn 790 | Ile | Ser | Pro | Lys | Leu 795 | His | Val | Asp | Lys | Gly 800 |
| Phe | Val | Asn | Ile | Leu 805 | Met | Thr | Ser | Phe | Leu 810 | Gln | туr | Ile | Ser | Ser 815 | Glu |
| Val | Asn | Pro | Pro 820 | Ser | Asp | Glu | Thr | Asp 825 | Ser | Ser | Ser | Ala | Pro 830 | Ser | Lys |
| Glu | Gln | Leu 835 | Glu | Gln | Glu | Lys | Gln 840 | Leu | Leu | Leu | Ser | Phe 845 | Lys | Pro | Val |
| Met | Gln 850 | Lys | Phe | Leu | His | Asp 855 | His | Val | Asp | Leu | Gln 860 | Val | Ser | Ala | Leu |
| Tyr 865 | Ala | Leu | Gln | Val | His 870 | Cys | туг | Asn | Ser | Asn 875 | Phe | Pro | Lys | Gly | Met 880 |
| Leu | Leu | Arg | Phe | Phe | Val | His | Phe | | Asp | Met | Glu | Ile | Ile | Glu | Glu |

PCT/US00/05881

Glu Ala Phe Leu Ala Trp Lys Glu Asp Ile Thr Gln Glu Phe Pro Gly 900 905 910

Lys Gly Lys Ala Leu Phe Gln Val Asn Gln Trp Leu Thr Trp Leu Glu 915 920 925

Thr Ala Glu Glu Glu Glu Ser Glu Glu Glu Ala Asp 930 935 940

<210> 679

<211> 212

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (7)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (160)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (172)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 679

Ser Trp Lys Glu Glu Glu Xaa Lys Pro His Leu Gln Gly Lys Pro Gly
1 5 10 15

Arg Pro Leu Ser Pro Ala Asn Val Pro Ala Leu Pro Gly Glu Thr Val 20 25 30

Thr Ser Pro Val Arg Leu His Pro Asp Tyr Leu Ser Pro Glu Glu Ile 35 40 45

Gln Arg Gln Leu Gln Asp Ile Glu Arg Arg Leu Asp Ala Leu Glu Leu 50 55 60

Arg Gly Val Glu Leu Glu Lys Arg Leu Arg Ala Ala Glu Gly Asp Asp 65 70 75 80

Ala Glu Asp Ser Leu Met Val Asp Trp Phe Trp Leu Ile His Glu Lys 85 90 95

Gln Leu Leu Arg Gln Glu Ser Glu Leu Met Tyr Lys Ser Lys Ala

653

100 105 110 Gln Arg Leu Glu Gln Gln Leu Asp Ile Glu Gly Glu Leu Arg Arg 115 120 Leu Met Ala Lys Pro Glu Ala Leu Lys Ser Leu Gln Glu Arg Arg Arg 135 Glu Gln Glu Leu Leu Glu Gln Tyr Val Ser Thr Val Asn Asp Arg Xaa 150 155 Asp Ile Val Asp Ser Leu Asp Glu Asp Arg Leu Xaa Glu Gln Glu Glu 165 170 Asp Gln Met Leu Arg Asp Met Ile Glu Lys Leu Gly Leu Gln Arg Lys 185 Lys Ser Lys Phe Arg Leu Ser Lys Ile Trp Ser Pro Lys Ser Lys Ser 200 . 205 Ser Pro Ser Gln 210 <210> 680 <211> 412 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (172) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (404) <223> Xaa equals any of the naturally occurring L-amino acids <400> 680 Val Ala Val Glu Leu Gly Ser Leu Arg Gly Gly Thr Met Ala Ser Glu Lys Pro Leu Ala Ala Val Thr Cys Thr Ala Pro Val Asn Ile Ala Val 20 Ile Lys Tyr Trp Gly Lys Arg Asp Glu Glu Leu Val Leu Pro Ile Asn

Ser Ser Leu Ser Val Thr Leu His Gln Asp Gln Leu Lys Thr Thr Thr

| | 50 | | | | | 55 | | | | | 60 | | | | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|---------------------|------------|------------|------------|
| Thr 65 | Ala | Val | Ile | Ser | Lys 70 | Asp | Phe | Thr | Glu | Asp 75 | Arg | Ile | Trp | Leu | Asn 80 |
| Gly | Arg | Glu | Glu | Asp 85 | Val | Gly | Gln | Pro | Arg 90 | Leu | Gln | Ala | Cys | Leu 95 | Arg |
| Glu | Ile | Arg | Cys 100 | Leu | Ala | Arg | Lys | Arg 105 | Arg | Asn | Ser | Arg | Asp 110 | Gly | Asp |
| Pro | Leu | Pro 115 | Ser | Ser | Leu | Ser | Cys 120 | Lys | Val | His | Val | Ala 125 | Ser | Val | Asn |
| Asn | Phe 130 | Pro | Thr | Ala | Ala | Gly 135 | Leu | Ala | Ser | Ser | Ala 140 | Ala | Gly | Туr | Ala |
| Cys 145 | Leu | Ala | Туг | Thr | Leu 150 | Ala | Arg | Val | Tyr | Gly 155 | Val | Glu | Ser | Asp | Leu 160 |
| Ser | Glu | Val | Ala | Arg 165 | Arg | Gly | Ser | Gly | Ser 170 | Ala | Xaa | Arg | Ser | Leu 175 | Tyr |
| Gly | Gly | Phe | Val 180 | Glu | Trp | Gln | Met | Gly 185 | Glu | Gln | Ala | Asp | Gly 190 | Lys | Asp |
| Ser | Ile | Ala 195 | Arg | Gln | Val | Ala | Pro 200 | Glu | Ser | His | Trp | Pro 2 0 5 | Glu | Leu | Arg |
| Val | Leu 210 | Ile | Leu | Val | Val | Ser 215 | Ala | Glu | Lys | Lys | Leu 220 | Thr | Gly | Ser | Thr |
| Val 225 | Gly | Met | Arg | Ala | Ser 230 | Val | Glu | Thr | Ser | Pro 235 | Leu | Leu | Arg | Phe | Arg 240 |
| | | | | 245 | Pro | | _ | | 250 | | | | Ī | 255 | |
| | | | 260 | | Pro | | | 265 | | | | | 270 | | |
| | | 275 | | | Thr | | 280 | | | | | 285 | | | • |
| | 290 | | | | Trp | 295 | | | | | 300 | | | | |
| 305 | | | | | Thr 310 | | | | | 315 | | | | | 320 |
| 4SN | Ата | val | rre | rne | Thr | Leu | ASP | Asp | Thr | val | ата | GLU | rne | val | Ala |

655

325 330 335

Ala Val Trp His Gly Phe Pro Pro Gly Ser Asn Gly Asp Thr Phe Leu 340 345 350

Lys Gly Leu Gln Val Arg Pro Ala Pro Leu Ser Ala Glu Leu Gln Ala 355 360 365

Ala Leu Ala Met Glu Pro Thr Pro Gly Gly Val Lys Tyr Ile Ile Val 370 375 380

Thr Gln Val Gly Pro Gly Pro Gln Ile Leu Asp Asp Pro Cys Ala His 385 390 395 400

Leu Leu Gly Xaa Asp Gly Leu Pro Lys Pro Ala Ala
405 410

<210> 681

<211> 61

<212> PRT

<213> Homo sapiens

<400> 681

Lys Lys Thr Arg His Leu Ser Lys Ile Leu Cys Gly Lys Met Thr Val $1 \ \ \,$ 5 $\ \ \,$ 10 $. \ \ \,$ 15

Asn Lys Met Arg Val Ser Gly Pro Phe Val Leu Leu Ser Phe Phe Asp 20 25 30

Tyr Lys Phe Leu Leu Thr His Thr Ile Met Ser Ala Asn Pro Leu Leu 35 40 45

Pro Arg Glu Arg Asn Cys Ala Pro Ser Val Leu Leu Pro 50 55 60

<210> 682

<211> 243

<212> PRT

<213> Homo sapiens

<400> 682

Ser Ala Pro Pro Pro Pro Arg Arg Lys Thr Ala Pro Pro Ala His Arg
1 5 10 15

Gln Arg Pro Pro Pro Gln Ser Pro Thr Ala Thr Gly Leu Gly Pro Ala
20 25 30

656

Ala Arg Ser Cys Leu Pro Gln Pro Pro Ser Arg Gly Pro Gln Pro Pro
35 40 45

Pro Thr Leu Pro His Gly Pro Gly Ala Met Ser Glu Leu Glu Gln Leu 50 55 60

Arg Gln Glu Ala Glu Gln Leu Arg Asn Gln Ile Arg Asp Ala Arg Lys
65 70 75 80

Ala Cys Gly Asp Ser Thr Leu Thr Gln Ile Thr Ala Gly Leu Asp Pro
85 90 95

Val Gly Arg Ile Gln Met Arg Thr Arg Arg Thr Leu Arg Gly His Leu 100 105 110

Ala Lys Ile Tyr Ala Met His Trp Gly Thr Asp Ser Arg Leu Leu Val 115 120 125

Ser Ala Ser Gln Asp Gly Lys Leu Ile Ile Trp Asp Ser Tyr Thr Thr 130 135 140

Asn Lys Val His Ala Ile Pro Leu Arg Ser Ser Trp Val Met Thr Cys 145 150 155 160

Ala Tyr Ala Pro Ser Gly Asn Phe Val Ala Cys Gly Gly Leu Asp Asn 165 170 175

Ile Cys Ser Ile Tyr Ser Leu Lys Thr Arg Glu Ala Thr Ser Gly Ser

Ala Gly Ser Cys Leu Ala Thr Leu Gly Thr Cys Arg Val Ala Ala Ser 195 200 205

Trp Met Thr Thr Lys Ser Ser Pro Ala Leu Gly Ile Pro Pro Val Pro 210 215 220

Cys Gly Thr Leu Arg Gln Ala Ser Arg Gln Trp Val Leu Leu Asp Thr 225 230 235 240

Val Gly Met

<210> 683

<211> 146

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (133) <223> Xaa equals any of the naturally occurring L-amino acids <400> 683 Asp Leu Glu Gly Asp Ala Gly Tyr Thr Gly Gly Leu Arg Gln Gly His 10 Ala Gly Gly Ala Gly Glu Leu Ala Arg Thr Leu Ala Leu Lys Pro Thr 25 Ser Leu Glu Leu Phe Arg Thr Lys Val Asn Ala Leu Thr Tyr Gly Glu 35 , 40 Val Leu Arg Leu Arg Gln Thr Glu Arg Leu His Gln Glu Gly Thr Leu 50 55 Ala Pro Pro Ile Leu Glu Leu Arg Glu Lys Leu Lys Pro Glu Leu Met 70 Gly Leu Ile Arg Gln Gln Arg Leu Leu Arg Leu Cys Glu Gly Thr Leu 85 90 Phe Arg Lys Ile Ser Ser Arg Arg Gln Asp Lys Leu Trp Phe Cys 105 Cys Leu Ser Pro Asn His Lys Leu Leu Gln Tyr Gly Asp Met Glu Glu 120 Gly Ala Ser Ala Xaa Pro Trp Arg Val Cys Pro Ser Asn Ser Leu Trp 135 Pro Thr 145 <210> 684 <211> 300 <212> PRT <213> Homo sapiens

<400> 684 、

Val Tyr Ser Cys Gly Phe Gln Val Gln Ser Trp Ser Pro Arg Trp Ile 1 5 10 15

Trp Val Thr Thr Lys Ser Lys Ile Gly Ala Pro Arg Ser Ser Phe Cys
20 25 30

Trp His Arg Leu Pro Ser Thr Ser Gln Leu His Leu Cys Pro Ala Glu 35 40 45

| Gly | Glu 50 | Ala | Pro | Ser | Ala | Gly 55 | Glu | Ala | Ala | Pro | Arg 60 | Ala | Pro | Thr | Gly |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Ser 65 | Glu | Pro | Lys | Pro | Gly 70 | Ala | Leu | Pro | Trp | Gly 75 | Pro | Arg | Ala | Pro | Asp 80 |
| Ser | Glu | Gly | Gly | Gly 85 | Gly | Ala | Gly | Ala | Ala 90 | Asp | Pro | Ala | Ala | Asn 95 | Ala |
| Gly | His | Gly | Ala 100 | Ser | Ser | Glu | Ala | Glu 105 | Cys | Gly | Cys | Gln | Arg 110 | Thr | Leu |
| Arg | Pro | Met 115 | Pro | Ser | Thr | Pro | Gly 120 | Pro | Gly | Ala | Ala | Ala 125 | Val | Arg | Ala |
| Leu | Gly 130 | Gln | Leu | Phe | His | Ile 135 | Ala | Cys | Phe | Thr | Cys 140 | His | Gln | Cys | Ala |
| Gln 145 | Gln | Leu | Gln | Gly | Gln 150 | Gln | Phe | туг | Ser | Leu 155 | Glu | Gly | Ala | Pro | Туг 160 |
| Cys | Glu | Gly | Cys | Туг 165 | Thr | Asp | Thr | Leu | Glu 170 | Lys | Cys | Asn | Thr | Cys 175 | Gly |
| Glu | Pro | Ile | Thr 180 | Asp | Arg | Met | Leu | Arg 185 | Ala | Thr | Gly | Lys | Ala 190 | Tyr | His |
| Pro | His | Cys 195 | Phe | Thr | Cys | Val | Val 200 | Cys | Ala | Arg | Pro | Leu 205 | Glu | Gly | Thr |
| Ser | Phe 210 | Ile | Val | Asp | Gln | Ala 215 | Asn | Arg | Pro | His | Cys 220 | Val | Pro | Asp | туr |
| His 225 | Lys | Gln | Туг | Ala | Pro 230 | Arg | Cys | Ser | Val | Cys 235 | Ser | Glu | Pro | Ile | Met 240 |
| Pro | Glu | Pro | Gly | Arg 245 | Asp | Glu | Thr | Val | Arg 250 | Val | Val | Ala | Leu | Asp 255 | Lys |
| Asn | Phe | His | Met 260 | Lys | Cys | туг | Lys | Cys 265 | Glu | Asp | Cys | Gly | Lys 270 | Pro | Leu |
| Ser | Ile | Glu 275 | Ala | Asp | Asp | Asn | Gly 280 | Cys | Phe | Pro | Leu | Asp 285 | Gly | His | Val |
| Leu | Cys 290 | Arg | Lys | Cys | His | Thr 295 | Ala | Arg | Ala | Gln | Thr 300 | | | | |

<400> 686

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<211> 130
<212> PRT
<213> Homo sapiens
<220>
<221> SITE
<222> (61)
<223> Xaa equals any of the naturally occurring L-amino acids
<400> 685
Ile Arg His Glu Asp Cys Pro Thr Pro Ser Gln Cys Val Val Ala Arg
Thr Leu Gly Lys Gln Gln Thr Val Met Ala Ile Ala Thr Lys Ile Ala
             20
Leu Gln Met Asn Cys Lys Met Gly Glu Leu Trp Arg Val Asp Ile
Pro Leu Lys Leu Val Met Ile Val Gly Ile Asp Cys Xaa His Asp Met
Thr Ala Gly Arg Arg Ser Ile Ala Gly Phe Val Ala Ser Ile Asn Glu
Gly Met Thr Arg Trp Phe Ser Arg Cys Ile Phe Gln Asp Arg Gly Gln
Glu Leu Val Asp Gly Leu Lys Val Cys Leu Gln Ala Ala Leu Arg Ala
            100
Trp Asn Ser Cys Asn Glu Tyr Met Pro Ser Arg Ile Ile Val Tyr Arg
                           120
Val Ala
   130
<210> 686
<211> 207
<212> PRT
<213> Homo sapiens
<220>
<221> SITE
<222> (84)
<223> Xaa equals any of the naturally occurring L-amino acids
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Ile Tyr Gln Val Tyr Asn Ala Leu Gln Glu Lys Val Gln Ala Val Cys

| Ala | Asp | Val | Glu 20 | Lys | Ser | Glu | Arg | Val 25 | Val | Glu | Ser | Cys | Gln 30 | Ala | Glu |
|--------------|----------------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Val | Asn | Lys 35 | Leu | Arg | Arg | Gln | Ile 40 | Thr | Gln | Arg | Lys | Asn 45 | Glu | Lys | Glu |
| Gln | Glu 50 | Arg | Arg | Leu | Gln | Gln 55 | Ala | Val | Leu | Ser | Arg 60 | Gln | Met | Pro | Ser |
| Glu 65 | Ser | Leu | Asp | Pro | Ala 70 | Phe | Ser | Pro | Arg | Met 75 | Pro | Ser | Ser | Gly | Phe 80 |
| Ala | Ala | Glu | Xaa | Arg 85 | Ser | Thr | Leu | Gly | Asp 90 | Ala | Glu | Ala | Ser | Asp 95 | Pro |
| Pro | Pro | Pro | Tyr 100 | Ser | Asp | Phe | His | Pro 105 | Asn | Asn | Gln | Glu | Ser 110 | Thr | Leu |
| Ser | His | Ser 115 | Arg | Met | Glu | Arg | Ser 120 | Val | Phe | Met | Pro | Arg 125 | Pro | Gln | Ala |
| Val | Gly 130 | Ser | Ser | Asn | Tyr | Ala 135 | Ser | Thr | Ser | Ala | Gly 140 | Leu | Lys | Tyr | Pro |
| Gly 145 | Ser | Gly | Ala | Asp | Leu 150 | Pro | Pro | Pro | Gln | Arg 155 | Ala | Ala | Gly | Asp | Ser 160 |
| Gly | Glu | Asp | Ser | Asp 165 | Asp | Ser | Asp | Tyr | Glu 170 | Asn | Leu | Ile | Asp | Pro 175 | Thr |
| Glu | Pro | Ser | Asn 180 | Ser | Glu | Tyr | Ser | His 185 | Ser | Lys | Asp | Ser | Arg 190 | Pro | Met |
| Ala | His | Pro 195 | Asp | Glu | Asp | Pro | Arg 200 | Asn | Thr | Gln | Thr | Ser 205 | Gln | Ile | |
| <211 <212 |)> 68 .> 10 !> PF !> Ho |) 1 RT | apie | ens | | | | | | | | | | | |
| <400 | > 68 | 37 | | | | | | | | ~ | | | | | |
| Ala l | Arg | Ala | Gly | Glu 5 | Glu | Gly | Val | Val | Thr 10 | Arg | Trp | Arg | His | Arg 15 | Leu |
| Gly | Gln | Gly | Ala | Cys | Pro | Trp | Asp | Arg | Ser | Arg | Pro | Met | Glu | Pro | Pro |

Gly Arg Ser Ser Arg Ser Thr Ala Ser His Thr Leu His Gln Tyr Cys
35 40 45

Cys Pro Thr Gln Val Leu Asp Ser Met Lys Leu Thr Pro Ser Gly Arg
50 55 60

Leu Ala Glu Ser Arg Glu Glu Glu Glu Glu Glu Glu Thr Glu Glu Glu 65 70 75 80

Glu Glu Glu Asp Ala His Gln Phe Cys Cys Pro Ala Ser Glu Cys Ser 85 90 95

Ser Pro Ser Ser Arg 100

<210> 688

<211> 62

<212> PRT

<213> Homo sapiens

<400> 688

Glu Arg Asn Ala Asp Pro Pro Asp Val Ser Leu Gly Lys Ala Val Asn
1 5 10 15

Gln Leu Ile Phe Ile Glu Asp Leu Leu Cys Pro Leu His Arg Val Ala 20 25 30

Ser Val Arg Glu Ser Trp Phe Phe Pro Arg Asn Thr Asp Phe Leu Ser 35 40 45

Gly Arg Leu His Val Phe Ile Tyr Phe His His Ser Arg Phe
50 55 60

<210> 689

<211> 549

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (1)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (7)

| <22 | 3> x | aa e | qual | s an | y of | the | nati | ural | ly o | ccur | ring | L-a | nino | aci | ds |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-------------|------------|
| <40 | 0> 6 | 89 | | | | | | | | | | | | | • |
| Xaa 1 | Arg | Trp | Ala | Cys 5 | Gly | Xaa | Leu | Leu | Leu 10 | Leu | Val | Arg | Gly | Gln 15 | Gly |
| Gln | Asp | Ser | Ala 20 | Ser | Pro | Ile | Arg | Thr 25 | Thr | His | Thr | Gly | Gln 30 | Val | Leu |
| Gly | Ser | Leu 35 | Val | His | Val | Lys | Gly 40 | Ala | Asn | Ala | Gly | Val 45 | Gln | Thr | Phe |
| Leu | Gly 50 | Ile | Pro | Phe | Ala | Lys 55 | Pro | Pro | Leu | Gly | Pro 60 | Leu | Arg | Phe | Ala |
| Pro 65 | Pro | Glu | Pro | Pro | Glu 70 | Ser | Trp | Ser | Gly | Val 75 | Arg | Asp | Gly | Thr | Thr 80 |
| His | Pro | Ala | Met | Cys 85 | Leu | Gln | Asp | Leu | Thr 90 | Ala | Val | Glu | Ser | Glu 95 | Phe |
| Leu | Ser | Gln | Phe 100 | Asn | Met | Thr | Phè | Pro 105 | Ser | Asp | Ser | Met | Ser 110 | Glu | Asp |
| Cys | Leu | Туг 115 | Leu | Ser | Ile | туг | Thr 120 | Pro | Ala | His | Ser | His 125 | Glu | Gly | Ser |
| Asn | Leu 130 | Pro | Val | Met | Val | Trp 135 | Ile | His | Gly | Gly | Ala 140 | Leu | Val | Phe | Gly |
| Met 145 | Ala | Ser | Leu | Tyr | Asp 150 | Gly | Ser | Met | Leu | Ala 155 | Ala | Leu | Glu | Asn | Val 160 |
| Val | Val | Val | Ile | 11e 165 | Gln | туг | Arg | Leu | Gly 170 | Val | Leu | Gly | Phe | Phe 17.5 | Ser |
| Thr | Gly | Asp | Lys 180 | His | Ala | Thr | Gly | Asn 185 | Trp | Gly | туг | Leu | Asp 190 | Gln | Val |
| Ala | Ala | Leu 195 | Arg | Trp | Val | Gln | Gln 200 | Asn | Ile | Ala | His | Phe 205 | Gly | Gly | Asn |
| Pro | Asp 210 | Arg | Val | Thr | Ile | Phe 215 | Gly | Glu | Ser | Ala | Gly 220 | Gly | Thr | Ser | Val |
| Ser 225 | Ser | Leu | Val | Val | Ser 230 | Pro | Ile | Ser | Gln | Gly 235 | Leu | Phe | His | Gly | Ala 240 |
| Ile | Met | Glu | Ser | Gly 245 | Val | Ala | Leu | Leu | Pro 250 | Gly | Leu | Ile | Ala | Ser 255 | Ser |

| нта | Asp | vai | 260 | ser | Thr | vaı | Val | 265 | Asn | Leu | ser | Ala | 270 | Asp | Gln |
|------------|------------|------------|------------|------------|------------------|------------|------------|------------------|------------|------------|------------|------------|------------|------------|------------|
| Val | Asp | Ser 275 | Glu | Ala | Leu | Val | Gly 280 | Суѕ | Leu | Arg | Gly | Lys 285 | Ser | Lys | Glu |
| Glu | Ile 290 | Leu | Ala | Ile | Asn | Lys 295 | Pro | Phe | Lys | Met | 11e 300 | Pro | Gly | Val | Val |
| Asp 305 | Gly | Val | Phe | Leu | Pro 310 | Arg | His | Pro | Gln | Glu 315 | Leu | Leu | Ala | Ser | Ala 320 |
| Asp | Phe | Gln | Pro | Val 325 | Pro | Ser | Ile | Val | Gly 330 | Val | Asn | Asn | Asn | Glu 335 | Phe |
| Gly | Trp | Leu | Ile 340 | Pro | Lys | Val | Met | Arg 345 | Ile | Tyr | Asp | Thr | Gln 350 | Lys | Glu |
| | | 355 | | | | | 360 | | | | Lys | 365 | | | |
| | 370 | | | | | 375 | | | | | Arg 380 | | | | |
| Gly 385 | Asp | Asn | Gly | Asp | Pro 390 | Gln | Thr | Leu | Gln | Ala 395 | Gln | Phe | Gln | Glu | Met 400 |
| | | | | 405 | | | | | 410 | | Gln | | | 415 | |
| | | | 420 | | | | | 425 [.] | | | Phe | | 430 | | |
| | | 435 | | | | | 440 | | - | | Lys | 445 | | - | _ |
| | 450 | | | | | 455 | | | | | Gly 460 | | | _ | |
| Lys 465 | Phe | Thr | Glu | Glu | Glu 470 | Glu | Gln | Leu | Ser | Arg 475 | Lyś | Met | Met | Lys | Tyr 480 |
| Trp | Ala | Asn | Phe | Ala 485 | Arg | Asn | Gly | Asn | Pro 490 | Asn | Gly | Glu | Gly | Leu 495 | Pro |
| | | | 500 | | | | | 505 | | | Leu | | 510 | | |
| Gln | Pro | Ala 515 | Val | Gly | Arg _. | Ala | Leu 520 | Lys | Ala | His | Arg | Leu 525 | Gln | Phe | Trp |

Lys Lys Ala Leu Pro Gln Lys Ile Gln Glu Leu Glu Glu Pro Glu Glu 530 535 540 Arg His Thr Glu Leu 545 <210> 690 ' <211> 155 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (36) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (46) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (50) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (85) <223> Xaa equals any of the naturally occurring L-amino acids <400> 690 Ser His Arg Val Thr His Cys Pro Tyr Ala Val Ala Leu Pro Glu Val Ala Pro Ala Gln Pro Leu Thr Glu Ala Leu Arg Ala Leu Cys His Val 20 25 Gly Leu Phe Xaa Phe Ala Phe Cys Ala Leu Phe Asp Cys Xaa Arg Pro 40 Val Xaa Gln Lys Ser Cys Asp Leu Leu Phe Leu Arg Asp Lys Ile Ala Ser Tyr Ser Ser Leu Arg Glu Ala Arg Gly Ser Pro Asn Thr Ala

70

85

Ser Ala Glu Ala Xaa Leu Pro Arg Trp Arg Ala Gly Glu Gln Ala Gln

665

Pro Pro Gly Asp Gln Glu Pro Glu Ala Val Leu Ala Met Leu Arg Ser 100 105 110

Leu Asp Leu Glu Gly Leu Arg Ser Thr Leu Ala Glu Ser Ser Asp His 115 120 125

Val Glu Lys Ser Pro Gln Ser Leu Leu Gln Asp Met Leu Ala Thr Gly 130 135 140

Gly Phe Leu Gln Gly Asp Glu Ala Asp Cys Tyr 145 150 155

<210> 691

<211> 149

<212> PRT

<213> Homo sapiens

<400> 691

Met Cys Leu Glu Arg Pro Leu Arg Glu Gly Pro Arg Val Met Glu Lys 1 5 10 15

Glu Ala Trp Pro Gly Ser Leu Glu Gly Arg Gly Gly Gly Trp Arg His
20 25 30

Leu Asp Cys Pro Leu Leu Ser His Thr Trp Gly Val Val Thr Pro Phe 35 40 45

Thr Pro Ala Arg Leu Pro Ser Ala Phe His Glu Leu His Leu Leu Pro 50 55 60

Thr Ser Leu Trp Arg Gly Trp Gly Pro Leu Ala Ser Thr Arg Gly Pro 65 70 75 80

Ser Ala Ser Pro Lys Pro Glu Pro Ser Ala Pro Gly Glu Asn Lys Trp 85 90 95

Leu Ser Phe Asp Thr Trp Gly Arg Arg Glu Ala Ala Gly Trp Arg Gln
100 105 110

Ser Gln Gly Arg Asp Thr Thr Glu Gly Asp Pro Asp Ile Pro Arg Lys 115 120 125

Phe Pro Ala Glu Gln Thr Ala Phe Gln Pro Glu Ala Cys Leu Asn Cys 130 135 140

Val Met Cys Asn Asn

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<210> 692
<211> 218
<212> PRT
<213> Homo sapiens
<220>
<221> SITE
<222> (160)
<223> Kaa equals any of the naturally occurring L-amino acids
Pro Gly Val Lys Leu Trp Asp Val Pro Val Met Leu Asp His Lys Asp
Leu Glu Ala Glu Ile His Pro Leu Lys Asn Glu Glu Arg Lys Ser Gln
Glu Asn Leu Gly Asn Pro Ser Lys Asn Glu Asp Asn Val Lys Ser Ala
                            40
Pro Pro Gln Ser Arg Leu Ser Arg Cys Arg Ala Ala Ala Phe Phe Leu
Ser Leu Phe Leu Cys Leu Phe Val Val Phe Val Val Ser Phe Val Ile
                   70
                                       75
Pro Cys Pro Asp Arg Pro Ala Ser Gln Arg Met Trp Arg Ile Asp Tyr
                85
                                   90
Ser Ala Ala Val Ile Tyr Asp Phe Leu Ala Val Asp Asp Ile Asn Gly
                               105
Asp Arg Ile Gln Asp Val Leu Phe Leu Tyr Lys Asn Thr Asn Ser Ser
               120
Asn Asn Phe Ser Arg Ser Cys Val Asp Glu Gly Phe Ser Ser Pro Cys
    130
                      135
                                           140
Thr Phe Ala Ala Ala Val Ser Gly Ala Asn Ala Ala Arg Ser Gly Xaa
                  150
                                      155
Asp Leu Trp Pro Lys Thr Trp Pro Ser Trp Ser Val Leu Cys Pro Ser
               165
                       170
Gln Glu Ala Val Arg His Leu Leu Pro Ala Ser Trp Trp Ala Asp Pro
Val Leu Ser Leu Gln Ser Thr Cys Ser Gln Gly Lys Pro Trp Lys Pro
                                              205
                           200
```

```
Gln Pro Ala Val Gln Gly Glu Trp Ser Ile
    210
<210> 693
<211> 68
<212> PRT
<213> Homo sapiens
<400> 693
Ser Cys Asn Ser Ser Asn Asn Ile Leu Gln Leu Pro Tyr Arg Asn Arg
Ser Gly Arg Ala Lys Ser Asp Leu Gly Lys Val Ile Arg Tyr Arg Leu
             20
                               25
Ser Ile Pro Phe Pro Lys Met Leu Gly Thr Arg Ser Ile Ser Asp Phe
Ile Ile Phe Phe Lys Val Trp Asn Ile Cys Ile Ile Leu Thr Ser Trp
                        55
Ala Ser Gln Ile
 65
<210> 694
<211> 234
<212> PRT
<213> Homo sapiens
<220>
<221> SITE
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (4)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (219)
<223> Xaa equals any of the naturally occurring L-amino acids
<400> 694
Cys Ala Xaa Xaa Leu Arg Gly Phe Asp Gln Gln Met Ser Ser Met Val
```

| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Ile | Glu | His | Met 20 | Ala | Ser | His | Gly | Thr 25 | Arg | Phe | Leu | Arg | Gly 30 | Cys | Ala |
| Pro | Ser | Arg 35 | Val | Arg | Arg | Leu | Pro 40 | Asp | Gly | Gln | Leu | Gln 45 | Val | Thr | Trp |
| Glu | Asp 50 | Ser | Thr | Thr | Gly | Lys 55 | Glu | Asp | Thr | Gly | Thr 60 | Phe | Asp | Thr | Val |
| Leu 65 | Trp | Ala | Ile | Gly | Arg 70 | Val | Pro | Asp | Thr | Arg 75 | Ser | Leu | Asn | Leu | Glu 80 |
| Lys | Ala | Gly | Val | Asp 85 | Thr | Ser | Pro | Asp | Thr 90 | Gln | Lys | Ile | Leu | Val 95 | Asp |
| Ser | Arg | Glu | Ala 100 | Thr | Ser | Val | Pro | His 105 | Ile | туr | Ala | Ile | Gly 110 | Asp | Val |
| Val | Glu | Gly 115 | Arg | Pro | Glu | Leu | Thr 120 | Pro | Thr | Ala | Ile | Met 125 | Ala | Gly | Arg |
| Leu | Leu 130 | Val | Gln | Arg | Leu | Phe 135 | Gly | Gly | Ser | Ser | Asp 140 | Leu | Met | Asp | Tyr |
| Asp 145 | Asn | Val | Pro | Thr | Thr 150 | Val | Phe | Thr | Pro | Leu 155 | Glu | Туг | Gly | Cys | Val 160 |
| Gly | Leu | Ser | Glu | Glu 165 | Glu | Ala | Val | Ala | Arg 170 | His | Gly | Gln | Glu | His 175 | Val |
| Glu | Val | Tyr | His 180 | Ala | His | Tyr | Lys | Pro 185 | Leu | Glu | Phe | Thr | Val 190 | Ala | Gly |
| Arg | Asp | Ala 195 | Ser | Gln | Cys | Tyr | Val 200 | Lys | Met | Val | Суѕ | Leu 205 | Arg | Glu | Pro |
| Pro | Gln 210 | Leu | Val | Leu | Gly | Leu 215 | His | Phe | Leu | Xaa | Pro 220 | Thr | Gln | Ala | Asn |
| Tyr 225 | Ser | Arg | Ile | Cys | Ser 230 | Gly | Asp | Lys | Cys | | | | | | |

<210> 695

<211> 460

<212> PRT

<213> Homo sapiens

| <400 |)> 69 | 95 | | | | | | | | | | | | | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Pro 1 | Cys | Pro | Pro | Arg 5 | Pro | Gln | Glu | Leu | Pro 10 | Gly | Arg | Ser | Pro | Ser 15 | Ser |
| Trp | Ser | Ala | Leu 20 | Gly | Trp | Pro | Ala | Ala 25 | Leu | Gly | Gly | Gly | Val 30 | Val | Ala |
| Val | Ala | Val 35 | Cys | Glu | Pro | Val | Ala 40 | Arg | Leu | Leu | Trp | Ala 45 | Gly | Thr | Leu |
| Lys | Ile 50 | Ala | Ala | Met | Ala | Glu 55 | Asn | Gly | Asp | Asn | Glu 60 | Lys | Met | Ala | Ala |
| Leu 65 | Glu | Ala | Lys | Ile | Cys 70 | His | Gln | Ile | Glu | Туг 75 | Tyr | Phe | Gly | Asp | Phe 80 |
| Asn | Leu | Pro | Arg | Asp 85 | Lys | Phe | Leu | Lys | Glu 90 | `Gln | Ile | Lys | Leu | Asp 95 | Glu |
| Gly | Trp | Val | Pro 100 | Leu | Glu | Ile | Met | 11e 105 | Lys | Phe | Asn | Arg | Leu 110 | Asn | Arg |
| Leu | Thr | Thr 115 | Asp | Phe | Asn | Val | 11e 120 | Val | Glu | Ala | Leu | Ser 125 | Lys | Ser | Lys |
| Ala | Glu 130 | Leu | Met | Glu | Ile | Ser 135 | Glu | Asp | Lys | Thr | Lys 140 | Ile | Arg | Arg | Ser |
| Pro 145 | Ser | Lys | Pro | Leu | Pro 150 | Glu | Val | Thr | Asp | Glu 155 | Tyr | Lys | Asn | | Val 160 |
| Lys | Asn | Arg | Ser | Val 165 | Tyr | Ile | Lys | Gly | Phe 170 | Pro | Thr | Asp | Ala | Thr 175 | Leu |
| Asp | Asp | Ile | Lys 180 | Glu | Trp | Leu | Glu | Asp 185 | Lys | Gly | Gln | Val | Leu 190 | Asn | Ile |
| Gln | Met | Arg 195 | Arg | Thr | Leu | His | Lys 200 | Ala | Phe | Lys | Gly | Ser 205 | Ile | Phe | Val |
| Val | Phe 210 | Asp | Ser | Ile | Glu | Ser 215 | Ala | Lys | Lys | Phe | Val 220 | Glu | Thr | Pro | Gly |
| Gln 225 | Lys | Tyr | Lys | Glu | Thr 230 | Asp | Leu | Leu | Ile | Leu 235 | Phe | Lys | Asp | Asp | Туг 240 |
| Phe | Ala | Lys | Lys | Asn 245 | Glu | Glu | Arg | Lys | Gln 250 | Asn | Lys | Val | Glu | Ala 255 | Lys |
| Leu | Arg | Ala | Lys 260 | Gln | Glu | Gln | Glu | Ala 265 | Lys | Gln | Lys | Leu | Glu 270 | Glu | Asp |

670

Ala Glu Met Lys Ser Leu Glu Glu Lys Ile Gly Cys Leu Leu Lys Phe 275 280 285

Ser Gly Asp Leu Asp Asp Gln Thr Cys Arg Glu Asp Leu His Ile Leu 290 295 300

Phe Ser Asn His Gly Glu Ile Lys Trp Ile Asp Phe Val Arg Gly Ala 305 310 315 320

Lys Glu Gly Ile Ile Leu Phe Lys Glu Lys Ala Lys Glu Ala Leu Gly
325 330 335

Lys Ala Lys Asp Ala Asn Asn Gly Asn Leu Gln Leu Arg Asn Lys Glu 340 345 350

Val Thr Trp Glu Val Leu Glu Gly Glu Val Glu Lys Glu Ala Leu Lys 355 360 365

Lys Ile Ile Glu Asp Gln Gln Glu Ser Leu Asn Lys Trp Lys Ser Lys 370 380

Gly Arg Arg Phe Lys Gly Lys Gly Lys Gly Asn Lys Ala Ala Gln Pro 385 390 395 400

Gly Ser Gly Lys Gly Lys Val Gln Phe Gln Gly Lys Lys Thr Lys Phe
405 410 415

Ala Ser Asp Asp Glu His Asp Glu His Asp Glu Asn Gly Ala Thr Gly 420 425 430

Pro Val Lys Arg Ala Arg Glu Glu Thr Asp Lys Glu Glu Pro Ala Ser 435 440 445

Lys Gln Gln Lys Thr Glu Asn Gly Ala Gly Asp Gln 450 455 460

<210> 696

<211> 80

<212> PRT

<213> Homo sapiens

<400> 696

Gly Glu Glu Gly Val Gly Ser Pro Ser Gly Ile Leu Ala Thr Pro Leu 1 5 10

Arg Ser Ala Arg Gly Thr Thr His Thr His Thr His Thr His Thr His 20 25 30

Thr His Ser His Thr His Ala His Phe Pro Ser Phe Pro Asp Pro Leu $35 \hspace{1.5cm} 40 \hspace{1.5cm} 45$

Phe Gln Ser Ser Pro Phe Ser Ser Gly Phe Ile Asp Glu Tyr Lys Tyr 50 55 60

Pro His Leu Trp Pro Val Met Ser Val Thr Cys Cys Arg Phe Cys Val 65 70 75 80

<210> 697

<211> 257

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (30)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 697

Trp Pro Arg Arg Pro Gly Pro His Leu Gly Val Leu Glu Phe Pro Gly
1 5 10 15

Ala Gly Cys Gly Ala Ser Ala Ala Gly Trp Pro Ser Ala Xaa Met Leu 20 25 30

Pro Gly Arg Gly Pro Arg Pro Phe Arg Ala Arg Leu Val Gly Arg Glu
35 40 45

Leu Val Ser Met Leu Ala Arg Glu Leu Pro Ala Ala Val Ala Pro Ala 50 55 60

Gly Pro Ala Ser Leu Ala Arg Trp Thr Leu Gly Phe Cys Asp Glu Arg
65 70 75 80

Leu Val Pro Phe Asp His Ala Glu Ser Thr Tyr Gly Leu Tyr Arg Thr
85 90 95

His Leu Leu Ser Arg Leu Pro Ile Pro Glu Ser Gln Val Ile Thr Ile 100 105 110

Asn Pro Glu Leu Pro Val Glu Glu Ala Ala Glu Asp Tyr Ala Lys Lys 115 120 125

Leu Arg Gln Ala Phe Gln Gly Asp Ser Ile Pro Val Phe Asp Leu Leu 130 135 140

 Ile
 Leu
 Gly
 Val
 Gly
 Pro
 Asp
 Gly
 His
 Thr
 Cys
 Ser
 Leu
 Phe
 Pro
 Asp
 160

 His
 Pro
 Leu
 Gln
 Glu
 Arg
 Glu
 Lys
 Ile
 Val
 Ala
 Pro
 Ile
 Ser
 Asp
 Asp
 Ile
 Ile
 Val
 Thr
 Leu
 Pro
 Val
 Leu
 Ile
 Pro
 Ile
 Pro
 Ile
 Pro
 Ile
 Pro
 Ile
 Pro
 Ile
 Leu

<210> 698

<211> 68

<212> PRT

<213> Homo sapiens

<400> 698

Gln Tyr Lys Thr Pro Ala Val Asp Thr Thr Met Met Thr Phe His Glu

1 5 10 15

Leu Val Phe Leu Val Leu Thr Ala Lys Phe Val Leu Phe Thr Gly Gln
20 25 30

Ile Ser Asn Lys Val Leu Gly Leu Lys Ile His Gly Trp Thr Glu Val 35 40 45

Pro Tyr Pro Leu Thr Met Glu Ala Gly Ala Thr Phe Trp Gly Tyr Leu 50 60

Phe Leu Asn Phe

| <21 | 1> 3 | 60 | | | | | | | | | | | | | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| <21 | 2> P | RТ | | | | | | | | | | | | | |
| <21 | 3> н | omo | sapi | ens | | | | | | | | | | | |
| <40 | 0> 6 | 99 | | | | | | | | | | | | | |
| Pro 1 | Cys | Ser | Ala | Thr 5 | Thr | Ala | Trp | Val | Lys 10 | Ser | Ser | Ile | Lys | Thr 15 | His |
| Leu | Cys | Ala | Ser 20 | Leu | Arg | His | Ile | Arg 25 | Phe | Leu | Leu | Ser | Val 30 | Cys | Leu |
| Leu | Cys | Leu 35 | Val | Ala | Gly | Thr | Ala 40 | Val | Ala | Val | Lys | Met 45 | Ala | Ser | Thr |
| Ser | Arg 50 | Leu | Asp | Ala | Leu | Pro 55 | Arg | Val | Thr | Cys | Pro 60 | Asn | His | Pro | Asp |
| Ala 65 | Ile | Leu | Val | Glu | Asp 70 | туr | Arg | Ala | Gly | Asp 75 | Met | Ile | Cys | Pro | Glu 80 |
| Cys | Gly | Leu | Val | Val 85 | Gly | Asp · | Arg | Val | Ile 90 | Asp | Val | Gly | Ser | Glu 95 | Trp |
| Arg | Thr | Phe | Ser 100 | Asn | Asp | Lys | Ala | Thr 105 | Lys | Asp | Pro | Ser | Arg 110 | Val | Gly |
| Asp | Ser | Gln 115 | Asn | Pro | Leu | Leu | Ser 120 | Asp | Gly | Asp | Leu | Ser 125 | Thr | Met | Ile |
| Gly | Lys 130 | Gly | Thr | Gly | Ala | Ala 135 | Ser | Phe | Asp | Glu | Phe 140 | Gly | Asn | Ser | Lys |
| Tyr 145 | Gln | Asn | Arg | Arg | Thr 150 | Met | Ser | Ser | Ser | Asp 155 | Arg | Ala | Met | Met | Asn 160 |
| Ala | Phe | Lys | Glu | Ile 165 | Thr | Thr | Met | Ala | Asp 170 | Arg | Ile | Asn | Leu | Pro 175 | Arg |
| Asn | Ile | Val | Asp 180 | Arg | Thr | Asn | Asn | Leu 185 | Phe | Lys | Gln | Val | Туг 190 | Glu | Gln |
| Lys | Ser | Leu 195 | Lys | Gly | Arg | Ala | Asn 200 | Asp | Ala | Ile | Ala | Ser 205 | Ala | Cys | Leu |
| Tyr | Ile 210 | Ala | Cys | Arg | Gln | Glu 215 | Gly | Val | Pro | Arg | Thr 220 | Phe | Lys | Glu | Ile |

Cys Ala Val Ser Arg Ile Ser Lys Lys Glu Ile Gly Arg Cys Phe Lys 225 230 235 240

Leu Ile Leu Lys Ala Leu Glu Thr Ser Val Asp Leu Ile Thr Thr Gly

245 250 255 Asp Phe Met Ser Arg Phe Cys Ser Asn Leu Cys Leu Pro Lys Gln Val 260 265 Gln Met Ala Ala Thr His Ile Ala Arg Lys Ala Val Glu Leu Asp Leu 280 Val Pro Gly Arg Ser Pro Ile Ser Val Ala Ala Ala Ala Ile Tyr Met 295 Ala Ser Gln Ala Ser Ala Glu Lys Arg Thr Gln Lys Glu Ile Gly Asp 310 Ile Ala Gly Val Ala Asp Val Thr Ile Arg Gln Ser Tyr Arg Leu Ile Tyr Pro Arg Ala Pro Asp Leu Phe Pro Thr Asp Phe Lys Phe Asp Thr 340 345 Pro Val Asp Lys Leu Pro Gln Leu 355 <210> 700 <211> 364 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (13) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (30) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (353) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <223> Xaa equals any of the naturally occurring L-amino acids <400> 700

| Pro 1 | Ser | Trp | Leu | Arg 5 | Ala | Arg | Ser | Ser | Arg 10 | Ser | Trp | Xaa | Ala | Ser 15 | Pro |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Arg | Gly | Pro | Gln 20 | Pro | Pro | Arg | Ile | Arg 25 | Ala | Arg | Ser | Ala | Xaa 30 | Pro | Met |
| Glu | Gly | Ala 35 | Arg | Val | Phe | Gly | Ala 40 | Leu | Gly | Pro | Ile | Gly 45 | Pro | Ser | Ser |
| Pro | Gly 50 | Leu | Thr | Leu | Gly | Gly 55 | Leu | Ala | Val | Ser | Glu 60 | His | Arg | Leu | Ser |
| Asn 65 | Lys | Leu | Leu | Ala | Тгр 70 | Ser | Gly | Val | Leu | Glu 75 | Trp | Gln | Glu | Lys | Arg 80 |
| Arg | Pro | Tyr | Ser | Asp 85 | Ser | Thr | Ala | Lys | Leu 90 | Lys | Arg | Thr | Leu | Pro 95 | Cys |
| Gln | Ala | Tyr | Val 100 | Asn | Gln | Gly | Glu | Asn 105 | Leu | Glu | Thr | Asp | Gln 110 | Trp | Pro |
| Gln | Lys | Leu 115 | Ile | Met | Gln | Leu | Ile 120 | Pro | Gln | Gln | Leu | Leu 125 | Thr | Thr | Leu |
| Gly | Pro 130 | Leu | Phe | Arg | Asn | Ser 135 | Gln | Leu | Ala | Gln | Phe 140 | His | Phe | Thr | Asn |
| Arg 145 | Asp | Cys | Asp | Ser | Leu 150 | Lys | Gly | Leu | Cys | Arg 155 | Ile | Met | Gly | Asn | Gly 160 |
| Phe | Ala | Gly | Cys | Met 165 | Leu | Phe | Pro | His | 11e 170 | Ser | Pro | Cys | Glu | Val 175 | Arg |
| Val | Leu | Met | Leu 180 | Leu | Tyr | Ser | Ser | Lys 185 | Lys | Lys | Ile | Phe | Met 190 | Gly | Leu |
| Ile | Pro | Туг 195 | Asp | Gln | Ser | Gļ'n | Phe 200 | Val | Ser | Ala | Ile | Arg 205 | Gln | Val | Ile |
| Thr | Thr 210 | Arg | Lys | Gln | Ala | Val 215 | Gly | Pro | Gly | Gly | Val 220 | Asn | Ser | Gly | Pro |
| Val 225 | Gln | Ile | Val | Asn | Asn 230 | Lys | Phe | Leu | Ala | Trp 235 | Ser | Gly | Val | Met | Glu 240 |
| Prp | Gln | Glu | Pro | Arg 245 | Pro | Glu | Pro | Asn | Ser 250 | Arg | Ser | Lys | Arg | Trp 255 | Leu |
| Pro | Ser | His | Val | Tyr | Val | Asn | Gln | Gly | Glu | Ile | Leu | Arg | Thr | Glu | Gln |

PCT/US00/05881

Trp Pro Arg Lys Leu Tyr Met Gln Leu Ile Pro Gln Gln Leu Leu Thr 275 280 285

Thr Leu Val Pro Leu Phe Arg Asn Ser Arg Leu Val Gln Phe His Phe 290 295 300

Thr Lys Asp Leu Glu Thr Leu Lys Ser Leu Cys Arg Ile Met Asp Asn 305 310 315 320

Gly Phe Ala Gly Cys Val His Phe Ser Tyr Lys Ala Ser Cys Glu Ile 325 330 335

Arg Val Leu Met Leu Leu Tyr Ser Ser Glu Lys Lys Ile Phe Ile Gly 340 345 350

Xaa Ile Pro His Asp Gln Gly Xaa Phe Val Gln Arg 355 360

<210> 701

WO 00/55173

<211> 156

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (33)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 701

Gly Thr Arg Gly Ile Leu His Val Ala Val Pro Ala Arg Gly Thr His 1 5 10 15

Ala Gln Cys Cys Arg Asn Trp Thr Val Pro Asp Ser Gly Gln Gly Lys
20 25 30

Xaa Val Met Leu Glu Gly Gln Gly Arg Leu Glu Arg Val His Ile Pro 35 40 45

Leu Ser Ala Pro Ala Ser Ala Thr Val Gln Arg Pro Thr Gly Pro Gln 50 55 60

Pro Val Ala Cys Pro His Cys Pro Val Pro Thr Ser Asn Ser Pro Gln 65 70 75 80

Pro Leu Val Ala Ser Val Pro Cys Pro Leu Gly Phe Ser Ser Gln Pro 85 90 95

Ser Gly Leu Gly Leu Cys Arg Lys Val Met Pro Thr Gly Thr Leu Leu 100 105 110

Thr Pro Gly Ser Phe Met Asp Val Val Ser Glu Leu Arg Thr Arg Gly

Cys Gln Met Phe Leu Ala Pro His Val Ser Phe Arg Thr Glu Gln Lys 130 135 140

His Lys Asp Ser Ala Lys Ser Ser Leu Tyr Ser Leu 145 150 155

<210> 702

<211> 150

<212> PRT

<213> Homo sapiens

<400> 702

Ala Gly His Gly Leu Gly Val Arg Ala Gly Leu Lys Glu Phe Ala Thr
1 5 10 15

Asn Leu Thr Glu Ser Gly Val His Gly Ala Leu Leu Ala Leu Asp Glu 20 25 30

Thr Phe Asp Tyr Ser Asp Leu Ala Leu Leu Gln Ile Pro Thr Gln 35 40 45

Asn Ala Gln Ala Arg Gln Leu Leu Glu Lys Glu Phe Ser Asn Leu Ile $50 \hspace{1cm} 55 \hspace{1cm} 60$

Ser Leu Gly Thr Asp Arg Arg Leu Asp Glu Asp Ser Ala Lys Ser Phe 65 70 75 80

Ser Arg Ser Pro Ser Trp Arg Lys Met Phe Arg Glu Lys Asp Leu Arg 85 90 95

Gly Val Thr Pro Asp Ser Ala Glu Met Leu Pro Pro Asn Phe Arg Ser 100 105 110

Ala Ala Gly Ala Leu Gly Ser Pro Gly Leu Pro Leu Arg Lys Leu 115 120 125

Gln Pro Glu Gly Gln Thr Ser Gly Ser Ser Arg Ala Asp Gly Val Ser 130 135 140

Val Arg Thr Tyr Ser Cys 145 150

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<211> 527
<212> PRT
<213> Homo sapiens
<220>
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<222> (243)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
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<222> (257)
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<222> (259)
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<222> (471)
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<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (519)
<223> Xaa equals any of the naturally occurring L-amino acids
<400> 703
Cys Val Cys Val Glu Gly Val Glu Gly Pro Arg Cys Asp Lys Cys Thr
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| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
|-----------|-----------|------------|------------|------------------|-----------|-----------|------------|------------|-----------|-----------|-----------|------------|------------|-----------|-----------|
| Arg | Gly | Tyr | Ser 20 | Gly | Val | Phe | Pro | Asp 25 | Cys | Thr | Pro | Cys | His 30 | Gln | Cys |
| Phe | Ala | Leu 35 | Trp | Asp | Val | Ile | Ile 40 | Ala | Glu | Leu | Thr | Asn 45 | Arg | Thr | His |
| Arg | Phe 50 | Leu | Glu | Lys | Ala | Lys 55 | Ala | Leu | Lys | Ile | Ser 60 | Gly | Val | Ile | Gly |
| Pro 65 | Tyr | Arg | Glu | Thr | Val 70 | Asp | Ser | Val | Glu | Arg 75 | Lys | Val | Ser | Glu | Ile 80 |
| Lys | Asp | Ile | Leu | Ala 85 | Gln | Ser | Pro | Ala | Ala 90 | Glu | Pro | Leu | Lys | Asn 95 | Ile |
| Gly | Asn | Leu | Phe 100 | Glu | Glu | Ala | Glu | Lys 105 | Leu | Ile | Lys | Asp | Val 110 | Thr | Glu |
| Met | Met | Ala 115 | Gln | Val | Glu | Val | Lys 120 | Leu | Ser | Asp | Thr | Thr 125 | Ser | Gln | Ser |
| | 130 | | | Lys | | 135 | | | | | 140 | | | | |
| 145 | | | | Vaİ | 150 | | | | | 155 | | | | | 160 |
| | | | | Arg 165 | | | | | 170 | | | | | 175 | |
| | | | 180 | Ala _. | | | | 185 | | | | | 190 | | |
| | | 195 | | Glu | | | 200 | | | | | 205 | | | |
| | 210 | | | Arg | | 215 | | | | | 220 | | | | |
| 225 | | | | Asp | 230 | | | | | 235 | | | | | 240 |
| | | | | Glu 245 | | | | | 250 | | | | | 255 | |
| | | | 260 | Cys | | | | 265 | | | | | 270 | | |
| ırg | rys | Cys | GLy | Gly | Pro | GIA | Cys | Gly | Gly | Leu | Val | Thr | Val | Ala | His |

| | | 275 | | | | | 280 | | | | | 285 | | | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Asn | Ala 290 | Trp | Gln | Lys | Ala | Met 295 | Asp | Leu | Asp | Gln | Asp 300 | Val | Leu | Ser | Ala |
| Leu 305 | Ala | Glu | Val | Glu | Gln 310 | Leu | Ser | Lys | Met | Val 315 | Ser | Glu | Ala | Lys | Leu 320 |
| Arg | Ala | Asp | Glu | Ala 325 | Lys | Gln | Ser | Ala | Glu 330 | Asp | Ile | Leu | Leu | Lys 335 | Thr |
| Asn | Ala | Thr | Lys 340 | Glu | Lys | Met | Asp | Lys 345 | Ser | Asn | Glu | Glu | Leu 350 | Arg | Asn |
| Leu | Ile | Lys 355 | Gln | Ile | Arg | Asn | Phe 360 | Leu | Thr | Gln | Asp | Ser 365 | Ala | Asp | Leu |
| Asp | Ser 370 | Ile | Glu | Ala | Val | Ala 375 | Asn | Glu | Val | Leu | Lys 380 | Met | Glu | Met | Pro |
| Ser 385 | Thr | Pro | Gln | Gln | Leu 390 | Gln | Asn | Lèu | Thr | Glu 395 | Asp | Ile | Arg | Glu | Arg 400 |
| Val | Glu | Ser | Leu | Ser 405 | Gln | Val | Glu | Val | 11e 410 | Leu | Gln | His | Ser | Ala 415 | Ala |
| Asp | Ile | Ala | Arg 420 | Ala | Glu | Met | Leu | Leu 425 | Glu | Glu | Ala | Lys | Arg 430 | Ala | Ser |
| Lys | Ser | Ala 435 | Thr | Asp | Val | Lys | Val 440 | Thr | Ala | Asp | Met | Val 445 | Lys | Glu | Ala |
| Leu | Glu 450 | Glu | Ala | Glu | Lys | Ala 455 | Gln | Val | Ala | Ala | Glu 460 | Lys | Ala | Ile | Lys |
| Gln 465 | Ala | Asp | Glu | Asp | Ile 470 | Xaa | Arg | Asn | Pro | Glu 475 | Pro | Хаа | Asn | Phe | Xaa 480 |
| Leu | Glu | Phe | Xaa | Lys 485 | Gln | Gln | Leu | Ser | Gly 490 | Gly | Asn | Leu | Val | Gln 495 | Arg |
| Val | Pro | Arg | Ala 500 | Ser | Ser | Glu | Phe | Arg 505 | Glu | Asp | Val | Gly | Arg 510 | Xaa | Leu |
| Ser | Gly | Lys 515 | Leu | Ala | Gln | Xaa | Pro 520 | Gly | Gly | Gly | Arg | Ile 525 | Phe | Trp | |

WO 00/55173

<212> PRT <213> Homo sapiens <400> 704 Val Tyr Gln Arg Lys Ser Thr Val Val Leu Gly Gly Phe Leu Leu Trp 5 10 Asp Ile Asp Phe Leu Phe Phe Phe Arg Asn Ile Val Cys Cys Asn Leu 25 Asn Lys Asn Tyr Asp Ile Leu Arg Tyr Phe Ile Asp Lys Pro Asn Lys 40 Asn Ile Cys Phe Tyr Phe Lys Val Asn Val Phe Leu Phe Ser 55 <210> 705 <211> 44 <212> PRT <213> Homo sapiens <400> 705 Thr Glu Asp Leu Phe Gly Phe Lys His Leu Leu Arg Gln Tyr Leu Leu Gly Lys Pro Asn Ile Ala Asn Gly Gln Phe Asp Phe Asn Phe Ser Lys 25 Asp Thr Leu Leu Ser Arg Arg Leu Lys Cys Leu His <210> 706 <211> 193 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (1) <223> Xaa equals any of the naturally occurring L-amino acids Xaa Gly Arg Ala Trp Val Met Ala Ala Pro Gly Ala Leu Leu Val Met

10

Gly Val Ser Gly Ser Gly Lys Ser Thr Val Gly Ala Leu Leu Ala Ser

25

5

Glu Leu Gly Trp Lys Phe Tyr Asp Ala Asp Asp Tyr His Pro Glu Glu
35 40 45

Asn Arg Arg Lys Met Gly Lys Gly Ile Pro Leu Asn Asp Gln Asp Arg 50 55

Ile Pro Trp Leu Cys Asn Leu His Asp Ile Leu Leu Arg Asp Val Ala 65 70 75 80

Ser Gly Gln Arg Val Val Leu Ala Cys Ser Ala Leu Lys Lys Thr Tyr 85 90 95

Arg Asp Ile Leu Thr Gln Gly Lys Asp Gly Val Ala Leu Lys Cys Glu 100 105 110

Glu Ser Gly Lys Glu Ala Lys Gln Ala Glu Met Gln Leu Leu Val Val 115 120 125

His Leu Ser Gly Ser Phe Glu Val Ile Ser Gly Arg Leu Leu Lys Arg 130 135 140

Glu Gly His Phe Met Pro Pro Glu Leu Leu Gln Ser Gln Phe Glu Thr 145 150 155 160

Leu Glu Pro Pro Ala Ala Pro Glu Asn Phe Ile Gln Ile Ser Val Asp 165 170 175

Lys Asn Val Ser Glu Ile Ile Ala Thr Ile Met Glu Thr Leu Lys Met 180 185 190

Lys

<210> 707

<211> 121

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (102)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (103)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 707 Gly Ile Arg Gly Gln Thr Leu Trp Leu Gly Pro Leu Gly Ala Thr Leu 5 10 Trp Pro Leu Gly Ala Leu Glu Thr Ser His Val Leu Trp Ala Leu Trp 20 25 Arg Ala Leu Ala Leu His Gly Gly Ala Gly Arg His Cys Leu Pro Cys Pro Leu Pro Ala Ala Pro Ala Leu Val Cys Arg Leu Gly Pro Gly Cys Leu Leu Cly Val Trp Pro Arg Ala Pro Val Lys Pro Trp Arg His Cys Val Cys Val Met Gly Ser Glu Gly Leu Val Gly Ala Val His Trp 90 Ser Ser Leu Pro Xaa Xaa Ala Ile Ser Met Ala Pro Phe Ala Ala 105 Glu Asp Thr His Cys Gly Ser Val Gly 120 115 <210> 708 <211> 112 <212> PRT <213> Homo sapiens <400> 708 Asn Ser Phe Cys Tyr Phe His Ile Arg Val Gln Thr Tyr Lys Gly Ala Cys Ser Leu Lys Val His Asn Tyr Ser Tyr Ser Val Cys Leu Tyr Cys 25 Tyr Arg Met Leu Cys Phe Gly Ala Leu Ser Ser Ala Asp Pro Arg Ser 40 Ser Val Glu Ile His Cys Leu Gly His Ser Leu Ile Arg Met Leu Ala

Gly Asp Phe Val Ser Asp Val Ala Ser Leu Phe Ser Val His Arg Leu

Arg Val Thr Thr Val Ala Cys Arg Val His Pro Val Gly Ala Ala Gln

75

90 95

Leu Ser Glu Ser Lys Asn Leu Pro Thr Tyr Ser Asn Val Phe Ala Leu 100 105 110

<210> 709

<211> 72

<212> PRT

<213> Homo sapiens

<400> 709

Arg Arg Val Trp Val Leu Phe Pro Pro Gln Arg Pro Glu Ser Gly Trp $1 \hspace{1cm} 5 \hspace{1cm} 10 \hspace{1cm} 15$

Gly Val Ser Pro Val Glu Gly Glu Thr Val Pro Ala Leu Arg Gly Met 20 25 30

Lys Lys Ser Val Gly Leu Pro Val Ala Val Gln Cys Val Ala Leu Pro 35 40 45

Trp Gln Glu Glu Leu Cys Leu Arg Phe Met Arg Glu Val Glu Arg Leu 50 \cdot 55 60

Met Thr Pro Glu Lys Gln Ser Ser 65 70

<210> 710

<211> 84

<212> PRT

<213> Homo sapiens

<400> 710

Arg Leu His Arg Tyr Pro Glu Ala Met Ala Ser Lys Gly Leu Gln Asp $1 \hspace{1cm} 5 \hspace{1cm} 10 \hspace{1cm} 15$

Leu Lys Gln Gln Val Glu Gly Thr Ala Gln Glu Ala Val Ser Ala Ala 20 25 30

Gly Ala Ala Ala Gln Gln Val Val Asp Gln Ala Thr Glu Ala Gly Gln
35 40 45

Lys Ala Met Asp Gln Leu Ala Lys Thr Thr Gln Glu Thr Ile Asp Lys 50 60

Thr Ala Asn Gln Ala Ser Asp Thr Phe Ser Gly Ile Gly Lys Lys Phe
65 70 75 80

Gly Leu Leu Lys

<210> 711

<211> 63

<212> PRT

<213> Homo sapiens

<400> 711

Arg Leu His Arg Tyr Pro Glu Ala Met Ala Ser Lys Gly Leu Gln Asp 1 5 10 15

Leu Lys Gln Gln Val Glu Gly Thr Ala Gln Glu Ala Ala Met Asp Gln
20 25 30

Leu Ala Lys Thr Thr Gln Glu Thr Ile Asp Lys Thr Ala Asn Gln Ala 35 40 45

Ser Asp Thr Phe Ser Gly Ile Gly Lys Lys Phe Gly Leu Leu Lys 50 55 60

<210> 712

<211> 86

<212> PRT

<213> Homo sapiens

<400> 712

Arg Leu Ala Asn Arg Ala Ile Met Ser His Lys Gln Ile Tyr Tyr Ser 1 5 10 15

Asp Lys Tyr Asp Asp Glu Glu Phe Glu Tyr Arg His Val Met Leu Pro 20 25 30

Lys Asp Ile Ala Lys Leu Val Pro Lys Thr His Leu Met Ser Glu Ser 35 40 45

Glu Trp Arg Asn Leu Gly Val Gln Gln Ser Gln Gly Trp Val His Tyr
50 55 60

Met Ile His Glu Pro Glu Pro His Ile Leu Leu Phe Arg Arg Pro Leu 65 70 75 80

Pro Lys Lys Pro Lys Lys

686

<210> 713

<211> 193

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (129)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 713

Val Gln Lys Ala Gly Ala Arg Ala Leu Ala Val Ala Gly Ala Ala Arg 1 5 10 15

Glu Glu Phe Ser Ala Gly Glu Gln Lys Thr Glu Arg Met Asp Lys Val 35 40 45

Gly Asp Ala Leu Glu Glu Val Leu Ser Lys Ala Leu Ser Gln Arg Thr
50 60

Ile Thr Val Gly Val Tyr Glu Ala Ala Lys Leu Leu Asn Val Asp Pro 65 70 75 80

Asp Asn Val Val Leu Cys Leu Leu Ala Ala Asp Glu Asp Asp Asp Arg 85 90 95

Asp Val Ala Leu Gln Ile His Phe Thr Leu Ile Gln Ala Phe Cys Cys 100 105 110

Glu Asn Asp Ile Asn Ile Leu Arg Val Thr Thr Arg Ala Gly Trp Arg 115 120 125

Xaa Pro Ala Leu Gly Asp Arg Arg Trp Pro Arg Gly Glu Arg Gly Arg 130 135 140

Arg Ala Ala Pro Gly Pro Ala Leu Arg Val Val Thr Asn Pro His Ser 145 150 155 160

Ser Gln Trp Lys Asp Pro Ala Leu Ser Gln Leu Ile Cys Phe Cys Arg 165 170 175

Glu Ser Arg Tyr Met Asp Gln Trp Val Pro Val Ile Asn Leu Pro Glu 180 185 190

Arg

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<210> 714
<211> 200
<212> PRT
<213> Homo sapiens
<220>
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<222> (90)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (93)
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<220>
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<222> (190)
<223> Xaa equals any of the naturally occurring L-amino acids
<400> 714
Gly Pro Gly Ala Cys Ser Gly Pro Ala Pro Ser Pro Arg Arg Pro Gln
Ser Val Lys Cys Glu Pro Arg Arg Gly Arg Ile Trp Pro Gly Ala
             20
Gly Gly Val Gly Ala Ala Arg His Val His His Gln Gly Ala
                             40
Gln Gln Ala Gly Arg Ala Ala Pro His Arg Ser His Ala Ala Ala Gly
Gly Gly Pro Ala Arg Arg Ala Pro Glu Met Pro Ala Ala Arg Ala Ala
65
                    70
Asp Leu Ala Ala Pro Ala Gly Ala Ala Xaa Cys Ala Xaa Pro Gly Pro
Trp Pro Leu Ser Ser Pro Gly Pro Arg Leu Val Phe Asn Arg Val Asn
                               105
Gly Arg Arg Ala Pro Ser Thr Ser Pro Ser Phe Glu Gly Thr Gln Glu
       115
                            120
Thr Tyr Thr Val Ala His Glu Glu Asn Val Arg Phe Val Ser Glu Ala
Trp Gln Gln Val Gln Gln Leu Asp Gly Gly Pro Ala Gly Glu Gly
```

145 150 155 160

Gly Pro Arg Pro Val Gln Tyr Val Glu Arg Thr Pro Asn Pro Arg Leu 165 170 175

Gln Asn Phe Val Pro Ile Asp Leu Asp Glu Trp Trp Ala Xaa Gln Phe 180 185 190

Leu Ala Arg Ile Thr Ser Cys Ser 195 200

<210> 715

<211> 106

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (15)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 715

Trp Ile Pro Arg Ala Ala Gly Ile Arg His Glu Leu Val Pro Xaa Leu
1 5 10 15

Trp Ser Arg Glu Glu Ala Met Ala Thr Met Glu Asn Lys Val Ile Cys
20 25 30

Ala Leu Val Leu Val Ser Met Leu Ala Leu Gly Thr Leu Ala Glu Ala 35 40 45

Gln Thr Glu Thr Cys Thr Val Ala Pro Arg Glu Arg Gln Asn Cys Gly 50 55 60

Phe Pro Gly Val Thr Pro Ser Gln Cys Ala Asn Lys Gly Cys Cys Phe 65 70 75 80

Asp Asp Thr Val Arg Gly Val Pro Trp Cys Phe Tyr Pro Asn Thr Ile 85 90 95

Asp Val Pro Pro Glu Glu Glu Cys Glu Phe 100 105

<210> 716

<211> 105

<212> PRT

<213> Homo sapiens

689

<400> 716

Glu Gly Arg Glu Ala Gly Ser Gly Leu Ser Val Asp Ser Arg Asp Lys
1 5 10 15

Gly His Glu Gly Arg Gly Leu Gly Pro Phe Arg Ile Pro Gln Asp Ser 20 25 30

Gln Val Gln Leu Cys Gln Lys Gly Thr Phe His Val Met Gln Leu Arg 35 40 45

Gly Leu Ser Leu Asn Pro Arg Leu Leu Leu Thr Leu Gly Ser Phe Asn 50 55 60

Gln Val Gly Gln Pro Leu Leu Gln Arg Gly Val Gly Trp Leu Ser Ser 65 70 75 80

Leu Ser His Ala Ala Cys Glu Asp Arg Gly Gly Val Gly Ser Gly
85
90
95

Lys Ser Pro Glu Asn Arg Arg Gly Ile 100 105

<210> 717

<211> 431

<212> PRT

<213> Homo sapiens

<400> 717

Arg Ala Ala Gly Ile Arg His Glu Arg Gly Gly Pro Thr Gly Ser Cys

1 5 10 15

Pro Gly Leu Pro Ser Pro Pro Met Val Leu Tyr Ile Lys Tyr Pro Gly 20 $$ 25 30

Trp Arg Ser His Met Leu Leu Thr Glu Gly Gly Asn Tyr His Ser Ser $\mathbf{35}$ $\mathbf{40}$

Leu Gly Thr Arg Cys Glu Leu Ser Cys Asp Arg Gly Phe Arg Leu Ile $50 \hspace{1cm} 55 \hspace{1cm} 60$

Gly Arg Arg Ser Val Gln Cys Leu Pro Ser Arg Arg Trp Ser Gly Thr
65 70 75 80

Ala Tyr Cys Arg Gln Met Arg Cys His Ala Leu Pro Phe Ile Thr Ser 85 90 95

Gly Thr Tyr Thr Cys Thr Asn Gly Val Leu Leu Asp Ser Arg Cys Asp 100 105 110

| Tyr | Ser | 115 | | Ser | Gly | Tyr | His 120 | Leu | Glu | Gly | Asp | Arg 125 | Ser | Arg | Ile |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Cys | Met 130 | | Asp | Gly | Arg | Trp 135 | | Gly | Gly | Glu | Pro 140 | Val | Cys | Val | Asp |
| 11e 145 | | Pro | Pro | Lys | 11e 150 | Arg | Cys | Pro | His | Ser 155 | Arg | Glu | Lys | Met | Ala 160 |
| Glu | Pro | Glu | Lys | Leu 165 | Thr | Ala | Arg | Val | Туг 170 | Trp | Asp | Pro | Pro | Leu 175 | Val |
| Lys | Asp | Ser | Ala 180 | Asp | Gly | Thr | Ile | Thr 185 | Arg | Val | Thr | Leu | Arg 190 | Gly | Pro |
| Glu | Pro | Gly 195 | Ser | His | Phe | Pro | Glu 200 | Gly | Glu | His | Val | Ile 205 | Arg | Tyr | Thr |
| | 210 | | | Ala | | 215 | · | | | | 220 | | | | |
| 225 | | | | Arg | 230 | | | | | 235 | | | | | 240 |
| Leu | Thr | Cys | Thr | Ser 245 | Ala | Gly | Asp | Asn | Tyr 250 | Gly | Ala | Thr | Cys | Glu 255 | Tyr |
| | | | 260 | Gly | | | | 265 | | | | | 270 | | |
| | | 275 | | Gln | | | 280 | | | | | 285 | | | |
| | 290 | | | Asn | | 295 | | | | | 300 | | | | |
| 305 | | | | Arg | 310 | | | | ÷ | 315 | | | | | 320 |
| | | | | Met 325 | | | | | 330 | | | | | 335 | |
| | | | 340 | His | | | | 345 | | | | | 350 | | |
| | | 355 | | Arg | | | 360 | | | | | 365 | | | |
| Slu | Glu 370 | Leu | Arg | Gln | | Gln 375 | Arg | Leu | Thr | Arg | Ser | Tyr | Phe | Asn | Met |

Val Leu Ile Asp Lys Gln Gly Ile Asp Arg Asp Arg Tyr Met Glu Pro 385 390 395 400

Val Thr Pro Glu Glu Ile Phe Thr Phe Ile Asp Asp Tyr Leu Leu Ser 405 410 415

Asn Gln Glu Leu Thr Gln Arg Arg Glu Gln Arg Asp Ile Cys Glu 420 425 430

<210> 718

<211> 417 +

<212> PRT

<213> Homo sapiens

<400> 718

Gln Gly Leu Pro Asp Gly Val Trp Ala His Gly Thr Cys Pro Gly His 1 5 10 15

Arg Leu Val Ser Ser Gln Arg Arg Ile Ile Ala Ser Gly Ser Glu Asp 20 25 30

Cys Thr Val Met Val Trp Gln Ile Pro Glu Asn Gly Leu Thr Ser Pro 35 40 45

Leu Thr Glu Pro Val Val Leu Glu Gly His Thr Lys Arg Val Gly 50 60

Ile Ile Ala Trp His Pro Thr Ala Arg Asn Val Leu Leu Ser Ala Gly 65 70 75 80

Cys Asp Asn Val Val Leu Ile Trp Asn Val Gly Thr Ala Glu Glu Leu 85 90 95

Tyr Arg Leu Asp Ser Leu His Pro Asp Leu Ile Tyr Asn Val Ser Trp
100 105 110

Asn His Asn Gly Ser Leu Phe Cys Ser Ala Cys Lys Asp Lys Ser Val 115 120 125

Arg Ile Ile Asp Pro Arg Arg Gly Thr Leu Val Ala Glu Arg Glu Lys 130 135 140

Ala His Glu Gly Ala Arg Pro Met Arg Ala Ile Phe Leu Ala Asp Gly 145 150 155 160

Lys Val Phe Thr Thr Gly Phe Ser Arg Met Ser Glu Arg Gln Leu Ala 165 170 175

| Leu | Trp | Asp | Pro 180 | Glu | Asn | Leu | Glu | Glu 185 | Pro | Met | Ala | Leu | Gln 190 | Glu | Leu |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Asp | Ser | Ser 195 | Asn | Gly | Ala | Leu | Leu 200 | Pro | Phe | Tyr | Asp | | Asp | Thr | Ser |
| Val | Val 210 | Tyr | Val | Cys | Gly | Lys 215 | Gly | Asp | Ser | Ser | Ile 220 | Arg | Tyr | Phe | Glu |
| Ile 225 | Thr | Glu | Glu | Pro | Pro 230 | Tyr | Ile | His | Phe | Leu 235 | Asn | Thr | Phe | Thr | Ser 240 |
| Lys | Glu | Pro | Gln | Arg 245 | Gly | Met | Gly | Ser | Met 250 | Pro | Lys | Arg | Gly | Leu 255 | Glu |
| Val | Ser | Lys | Cys 260 | Glu | Ile | Ala | Arg | Phe 265 | Tyr | Lys | Leu | His | Glu 270 | Arg | Lys |
| Cys | Glu | Pro 275 | Ile | Val | Met | Thr | Val 280 | Pro | Arg | Lys | Ser | Asp 285 | Leu | Phe | Gln |
| Asp | Asp 290 | Leu | Tyr | Pro | Asp | Thr 295 | Ala | Gly | Pro | Glu | Ala 300 | Ala | Leu | Glu | Ala |
| Glu 305 | Glu | Trp | Val | Ser | Gly 310 | Arg | Asp | Ala | Asp | Pro 315 | Ile | Leu | Ile | Ser | Leu 320 |
| Arg | Glu | Ala | Tyr | Val 325 | Pro | Ser | Lys | Gln | Arg 330 | Asp | Leu | Lys | Ile | Ser 335 | Arg |
| Arg | Asn | Val | Leu 340 | Ser | Asp | Ser | Arg | Pro 345 | Ala | Met | Ala | Pro | Gly 350 | Ser | Ser |
| His | Leu | Gly 355 | Ala | Pro | Ala | Ser | Thr 360 | Thr | Thr | Ala | Ala | Asp 365 | Ala | Thr | Pro |
| Ser | Gly 370 | Ser | Leu | Ala | Arg | Ala 375 | Gly | Glu | Ala | Gly | Lys 380 | Leu | Glu | Glu. | Val |
| Met 385 | Gln | Glu | Leu | Arg | Ala 390 | Leu | Arg | Ala | Leu | Val 395 | Lys | Glu | Gln | Gly | Asp 400 |
| Arg | Ile | Cys | Arg | Leu 405 | Glu | Glu | Gln | Leu | Gly 410 | Arg | Met | Glu | Asn | Gly 415 | Asp |

Ala

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<211> 290
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<213> Homo sapiens
<220>
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<220>
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<220>
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<222> (131)
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Arg Ala Val Glu Glu Thr Asp Ala Gly Leu Tyr Thr Cys Asn Leu His
             20
                                25
                                                    30
His His Tyr Cys His Leu Tyr Glu Ser Leu Ala Val Arg Leu Glu Val
                            40
Thr Asp Gly Pro Pro Ala Pro Pro Pro Thr Gly Thr Ala Arg Arg Arg
                        55
Cys Trp Arg Trp Arg Ala Ala Pro Ala Xaa Leu Thr Cys Val Asn Arg
        . 70
 65
Gly His Val Trp Thr Asp Arg His Val Glu Glu Ala Gln Gln Val Val
                                    90
His Trp Asp Arg Gln Pro Pro Gly Val Pro His Asp Arg Ala Asp Arg
            100
                               105
Leu Leu Asp Leu Tyr Ala Ser Ala Ser Ala Ala Leu Arg Ala Pro Phe
        115
                        120
Ser Ala Xaa Arg Val Ala Val Gly Ala Asp Ala Phe Lys Arg Gly Asp
Phe Ser Leu Arg Ile Glu Pro Leu Glu Val Ala Asp Glu Gly Thr Tyr
145
                   150
                                       155
Ser Cys His Leu His His His Tyr Trp Arg Ala Ala Thr Thr Ser Ser
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175 165 170 Met Ser Ser Pro Arg Ala Glu Pro Thr Ser Ser Ser Trp Ala 180 185 Thr Cys Trp Pro Arg Cys Cys Ser Ser Ser Cys Tyr Trp Ser Leu Ser 200 Ser Trp Pro Pro Ala Gly Arg Gly Gly Tyr Glu Tyr Ser Asp Gln Lys 210 215 220 Ser Gly Lys Ser Lys Gly Lys Asp Val Asn Leu Ala Glu Phe Ala Val 230 235 Ala Ala Gly Asp Gln Met Leu Tyr Arg Ser Glu Asp Ile Gln Leu Asp 250 Tyr Lys Asn Asn Ile Leu Lys Glu Arg Ala Glu Leu Ala His Ser Pro 260 265 Leu Pro Ala Lys Tyr Ile Asp Leu Asp Lys Gly Phe Arg Lys Glu Asn 280 285 Cys Lys 290 <210> 720 <211> 459 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (50) <223> Xaa equals any of the naturally occurring L-amino acids Asp Ala His Pro Lys Pro Cys Cys Glu Thr Ser Ala Ala Ala Cys Arg 5 10 Leu Val Glu Arg Ile Leu Thr Ser Trp Glu Glu Asn Asp Arg Val Gln Cys Ala Gly Gly Pro Arg Lys Gly Tyr Met Gly His Leu Thr Arg Val 40 Ala Xaa Ala Leu Val Gln Asn Thr Glu Lys Gly Pro Asn Ala Glu Gln 50 55 .

| Leu 65 | Arg | Gln | Leu | Leu | Lys 70 | Glu | Leu | Pro | Ser | Glu 75 | | Gln | Glu | Gln | Trp 80 |
|-----------|-----|------------|------------|------------|------------|-----|------------|------------|------------|-----------|-----|------------|------------|------------|-----------|
| Glu | Ala | Phe | Val | Ser 85 | Gly | Pro | Leu | Ala | Glu 90 | | Asn | Lys | Lys | Asn 95 | Met |
| Val | Asp | Leu | Val 100 | Asn | Thr | His | His | Leu 105 | His | Ser | Ser | Ser | Asp 110 | Asp | Glu |
| Asp | Asp | Arg 115 | Leu | Lys | Glu | Phe | Asn 120 | Phe | Pro | Glu | Glu | Ala 125 | Val | Leu | Gln |
| | 130 | | | | Phe | 135 | | | | | 140 | | | | |
| 145 | | | | | Asn 150 | | | | | 155 | | | | | 160 |
| | | | | 165 | Asp | | | | 170 | | | | | 175 | |
| | | | 180 | | Pro | | | 185 | | | | | 190 | | |
| | | 195 | | | Phe | | 200 | | | | | 205 | | | |
| | 210 | | | | Gly | 215 | | | | | 220 | | | | |
| 225 | | | | | Arg 230 | | | | | 235 | | | | | 240 |
| | | | | 245 | Thr | | | | 250 | | | | | 255 | |
| | | | 260 | | Glu | | | 265 | | | | | 270 | | |
| | | 275 | | | Tyr | | 280 | | | | | 285 | | | |
| | 290 | | | | Phe | 295 | | | | | 300 | | | | |
| 305 | | | | | Glu 310 | | | | | 315 | | | | | 320 |
| 2TU | стÀ | rro | ren | Ser 325 | Val | Pro | GIN | GLY | Leu 330 | Pro | Thr | Gln | Ser | Leu 335 | Ala |

Ser Pro Pro Ala Arg Asp Ala Leu Gln Leu Arg Ser Gln Asp Pro Thr 340 345 350

Pro Pro Ser Ala Pro Gln Glu Ala Thr Glu Gly Ser Lys Val Thr Glu 355 360 365

Pro Ser Ala Pro Cys Gln Ala Leu Val Ser Ile Gly Asp Leu Gln Ala 370 375 380

Thr Phe His Gly Ile Arg Ser Ala Pro Ser Ser Ser Asp Ser Ala Thr 385 390 395 400

Arg Asp Pro Ser Thr Ser Val Pro Ala Ser Gly Ala His Gln Pro Pro 405 410 415

Gln Thr Thr Glu Gly Glu Lys Ser Pro Glu Pro Leu Gly Leu Pro Gln 420 425 430

Ser Gln Ser Ala Gln Ala Leu Thr Pro Pro Pro Ile Pro Asn Gly Ser 435 440 445

Ala Pro Glu Gly Pro Ala Ser Pro Gly Ser Gln 450 455

<210> 721

<211> 523

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (12)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (115)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (194)

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<220>

<221> SITE

<222> (327)

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|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Leu 1 | Gln | Arg | Leu | Lys 5 | Leu | Ile | Lys | Pro | Leu 10 | Leu | Xaa | Phe | Glu | Ser 15 | Leu |
| Glu | Glu | Cys | Tyr 20 | Met | Ala | Lys | Ile | Leu 25 | Val | Ala | Glu | Gly | Thr 30 | Arg | Asp |
| Val | Pro | Ile 35 | Gly | Ala | Ile | Ile | Cys 40 | Ile | Thr | Val | Gly | Lys 45 | Pro | Glu | Asp |
| Ile | Glu 50 | Ala | Phe | Lys | Asn | Tyr 55 | Thr | Leu | Asp | Ser | Ser 60 | Aļa | Ala | Pro | Thr |
| Pro 65 | Gln | Ala | Ala | Pro | Ala 70 | Pro | Thr | Pro | Ala | Ala 75 | Thr | Ala | Ser | Pro | Pro 80 |
| Thr | Pro | Ser | Ala | Gln 85 | Ala | Pro | Gly | Ser | Ser 90 | туг | Pro | Pro | His | Met 95 | Gln |
| Val | Leu | Leu | Pro 100 | Ala | Leu | Ser | Pro | Thr 105 | Met | Thr | Met | Gly | Thr 110 | Val | Gln |
| Arg | Trp | Xaa 115 | Lys | Lys | Val | Gly | Glu 120 | Lys | Leu | Ser | Glu | Gly 125 | Asp | Leu | Leu |
| Ala | Glu 130 | Ile | Glu | Thr | Asp | Lys 135 | Ala | Thr | Ile | Gly | Phe 140 | Glu | Val | Gln | Glu |
| Glu 145 | Gly | туг | Leu | Ala | Lys 150 | Ile | Leu | Val | Pro | Glu 155 | Gly | Thr | Arg | Asp | Val 160 |
| Pro | Leu | Gly | Thr | Pro 165 | Leu | Cys | Ile | Ile | Val 170 | Glu | Lys | Glu | Ala | Asp 175 | Ile |
| Ser | Ala | Phe | Ala 180 | Asp | Tyr | Arg | Pro | Thr 185 | Glu | Val | Thr | Asp | Leu 190 | Lys | Pro |
| Gln | Xaa | Pro 195 | Pro | Pro | Thr | Pro | Pro 200 | Pro | Val | Ala | Ala | Val 205 | Pro | Pro | Thr |
| Pro | Gln 210 | Pro | Leu | Ala | Pro | Thr 215 | Pro | Ser | Ala | Pro | Cys 220 | Pro | 'Ala | Thr | Pro |
| Ala 225 | Gly | Pro | Lys | Gly | Arg 230 | Val | Phe | Val | Ser | Pro 235 | Leu | Ala | Lys | Lys | Leu 240 |
| Ala | Val | Glu | Lys | Gly 245 | Ile | Asp | Leu | Ţhr | Gln 250 | Val | Lys | Gly | Thr | Gly 255 | Pro |
| Asp | Gly | Arg | 11e 260 | Thr | Lys | Lys | Asp | Ile 265 | Asp | Ser | Phe | Val | Pro 270 | Ser | Lys |

Val Ala Pro Ala Pro Ala Ala Val Pro Pro Thr Gly Pro Gly Met 275 280 285

- Ala Pro Val Pro Thr Gly Val Phe Thr Asp Ile Pro Ile Ser Asn Ile 290 295 300
- Arg Arg Val Ile Ala Gln_1 Arg Leu Met Gln Ser Lys Gln Thr Ile Pro 305 310 315 320
- His Tyr Tyr Leu Ser Ile Xaa Val Asn Met Gly Glu Val Leu Leu Val 325 330 335
- Arg Lys Glu Leu Asn Lys Ile Leu Glu Gly Arg Ser Lys Ile Ser Val 340 345 350
- Asn Asp Phe Ile Ile Lys Ala Ser Ala Leu Ala Cys Leu Lys Val Pro 355 360 365
- Glu Ala Asn Ser Ser Trp Met Asp Thr Val Ile Arg Gln Asn His Val 370 375 380
- Val Asp Val Ser Val Ala Val Ser Thr Pro Ala Gly Leu Ile Thr Pro 385 390 395 400
- Ile Val Phe Asn Ala His Ile Lys Gly Val Glu Thr Ile Ala Asn Asp 405 410 415
- Val Val Ser Leu Ala Thr Lys Ala Arg Glu Gly Lys Leu Gln Pro His
 420 425 430
- Glu Phe Gln Gly Gly Thr Phe Thr Ile Ser Asn Leu Gly Met Phe Gly
 435 440 445
- Ile Lys Asn Phe Ser Ala Ile Ile Asn Pro Pro Gln Ala Cys Ile Leu 450 455 460
- Ala Ile Gly Ala Ser Glu Asp Lys Leu Val Pro Ala Asp Asn Glu Lys 465 470 475 480
- Gly Phe Asp Val Ala Ser Met Met Ser Val Thr Leu Ser Cys Asp His 485 490 495
- Arg Val Val Asp Gly Ala Val Gly Ala Gln Trp Leu Ala Glu Phe Arg 500 505 510
- Lys Tyr Leu Glu Lys Pro Ile Thr Met Leu Leu 515 520

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<211> 111
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Asp Met Asn Asp Cys Tyr Ser Arg Leu Arg Arg Leu Val Pro Thr Ile
Pro Pro Asn Lys Lys Val Ser Lys Val Glu Ile Leu Gln His Val Ile
                            40
Asp Tyr Ile Leu Asp Leu Gln Leu Ala Leu Glu Thr His Pro Ala Leu
                        55
Leu Arg Gln Pro Pro Pro Pro Pro Pro His His Pro Ala Gly Thr
                    70
                                        75
Cys Pro Ala Ala Pro Pro Arg Thr Pro Leu Thr Ala Leu Asn Thr Asp
                85
                                   90
Pro Ala Gly Ala Val Asn Lys Gln Gly Asp Ser Ile Leu Cys Arg
           100
                               105
<210> 723
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<211> 723

<212> PRT

<213> Homo sapiens

<400> 723

Ser Gly Gly Gly Gly Arg Met Ile Lys Leu Phe Ser Leu Lys Gln
1 5 10 15

Gln Lys Lys Glu Glu Glu Ser Ala Gly Gly Thr Lys Gly Ser Ser Lys
20 25 30

Lys Ala Ser Ala Ala Gln Leu Arg Ile Gln Lys Asp Ile Asn Glu Leu 35 40 45

Asn Leu Pro Lys Thr Cys Asp Ile Ser Phe Ser Asp Pro Asp Asp Leu 50 55 60

Leu Asn Phe Lys Leu Val Ile Cys Pro Asp Glu Gly Phe Tyr Lys Ser Gly Lys Phe Val Phe Ser Phe Lys Val Gly Gln Gly Tyr Pro His Asp 90 Pro Pro Lys Val Lys Cys Glu Thr Met Val Tyr His Pro Asn Ile Asp 100 105 Leu Glu Gly Asn Val Cys Leu Asn Ile Leu Arg Glu Asp Trp Lys Pro 120 Val Leu Thr Ile Asn Ser Ile Ile Tyr Gly Leu Gln Tyr Leu Phe Leu 130 135 140 Glu Pro Asn Pro Glu Asp Pro Leu Asn Lys Glu Ala Ala Glu Val Leu 150 155 Gln Asn Asn Arg Arg Leu Phe Glu Gln Asn Val Gln Arg Ser Met Arg 170 Gly Gly Tyr Ile Gly Ser Thr Tyr Phe Glu Arg Cys Leu Lys 180 185 <210> 724 <211> 524 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (247) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (417) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (440) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (443) <223> Xaa equals any of the naturally occurring L-amino acids

<400> 724

| Arg 1 | Arg | Arg | Arg | Ala 5 | Asp | Arg | Ala | Thr | Pro 10 | Arg | Glu | Val | Leu | Glu 15 | Thr |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Pro | Gly | Ala | Ala 20 | Ser | Val | Gln | Thr | Leu 25 | Pro | Ser | Val | Thr | Met 30 | Lys | Leu |
| Trp | Val | Ser 35 | Ala | Leu | Leu | Met | Ala 40 | Trp | Phe | Gly | Val | Leu 45 | Ser | Cys | Val |
| Gln | Ala 50 | Glu | Phe | Phe | Thr | Ser 55 | Ile | Gly | His | Met | Thr 60 | Asp | Leu | Ile | Туг |
| Ala 65 | Glu | Lys | Glu | Leu | Val 70 | Gln | Ser | Leu | Lys | Glu 75 | Туг | Ile | Leu | Val | Glu 80 |
| Glu | Ala | Lys | Leu | Ser 85 | Lys | Ile | Lys | Ser | Trp 90 | Ala | Asn | Lys | Met | Glu 95 | Ala |
| Leu | Thr | Ser | Lys 100 | Ser | Ala | Ala | Asp | Ala 105 | Glu | Gly | Tyr | Leu | Ala 110 | His | Pro |
| Val | Asn | Ala 115 | Tyr | Lys | Leu | Val | Lys 120 | Arg | Leu | Asn | Thr | Asp 125 | Trp | Pro | Ala |
| Leu | Glu 130 | Asp | Leu | Val | Leu | Gln 135 | Asp | Ser | Ala | Ala | Gly 140 | Phe | Ile | Ala | Asn |
| Leu 145 | Ser | Val | Gln | Arg | Gln 150 | Phe | Phe | Pro | Thr | Asp 155 | Glu | Asp | Glu | Ile | Gly 160 |
| Ala | Ala | Lys | Ala | Leu 165 | Met | Arg | Leu | Gln | Asp 170 | Thr | Tyr | Arg | Leu | Asp 175 | Pro |
| Gly | Thr | Ile | Ser 180 | Arg | Gly | Glu | Leu | Pro 185 | Gly | Thr | Lys | Tyr | Gln 190 | Ala | Met |
| Leu | Ser | Val 195 | Asp | Asp | Суѕ | Phe | Gly 200 | Met | Gly | Arg | Ser | Ala 205 | Tyr | Asn | Glu |
| Gly | Asp 210 | Tyr | Tyr | His | Thr | Val 215 | Leu | Trp | Met | Glu | Gln 220 | Val | Leu | Lys | Gln |
| Leu 225 | Asp | Ala | Gly | Glu | Glu 230 | Ala | Thr | Thr | Thr | Lys 235 | Ser | Gln | Val | Leu | Asp 240 |
| Tyr | Leu | Ser | Туr | Ala 245 | Val | Xaa | Gln | Leu | Gly 250 | Asp | Leu | His | Arg | Ala 255 | Leu |
| Glu | Leu | Thr | Arg | Arg | Leu | Leu | Ser | Leu | Asp | Pro | Ser | His | Glu | Arg | Ala |

| | | | 260 | | | | | 265 | | | | | 270 | | |
|-------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Gly | Gly | Asn 275 | Leu | Arg | Туг | Phe | Glu 280 | Gln | Leu | Leu | Glu | Glu 285 | Glu | Arg | Glu |
| Lys | Thr 290 | Leu | Thr | Asn | Gln | Thr 295 | Glu | Ala | Glu | Leu | Ala 300 | Thr | Pro | Glu | Gly |
| Ile 305 | Tyr | Glu | Arg | Pro | Val 310 | Asp | Tyr | Leu | Pro | Glu 315 | Arg | Asp | Val | Tyr | Glu 320 |
| Ser | Leu | Cys | Arg | Gly 325 | Glu | Gly | Val | Lys | Leu 330 | Thr | Pro | Arg | Arg | Gln 335 | Lys |
| Arg | Leu | Phe | Cys 340 | Arg | Tyr | His | His | Gly 345 | Asn | Arg | Ala | Pro | Gln 350 | Leu | Leu |
| Ile | Ala | Pro 355 | Phe | Lys | Glu | Glu | Asp 360 | Glu | Trp | Asp | Ser | Pro 365 | His | Ile | Val |
| Arg | Tyr 370 | Tyr | Asp | Val | Met | Ser 375 | Asp | Glu | Glu | Ile | Glu 380 | Arg | Ile | Lys | Glu |
| I,1e 385 | Ala | Lys | Pro | Lys | Leu 390 | Ala | Arg | Ala | Thr | Val 395 | Arg | Asp | Pro | Lys | Thr 400 |
| Gly | Val | Leu | Thr | Val 405 | Ala | Ser | Туг | Arg | Val 410 | Ser | Lys | Ser | Ser | Trp 415 | Leu |
| Xaa | Glu | Asp | Asp 420 | Asp | Pro | Val | Val | Ala 425 | Arg | Val | Asn | Arg | Arg 430 | Met | Gln |
| His | Ile | Thr 435 | Gly | Leu | Thr | Val | Xaa 440 | Thr | Ala | Xaa | Leu | Leu 445 | Gln | Val | Ala |
| Asn | Туг 450 | Gly | Val | Gly | Gly | Gln 455 | Tyr | Glu | Pro | His | Phe 460 | Asp | Phe | Ser | Arg |
| Asn 465 | Asp | Glu | Arg | Asp | Thr 470 | Phe | Lys | His | Leu | Gly 475 | Thr | Gly | Asn | Arg | Val 480 |
| Ala | Thr | Phe | Leu | Asn 485 | Tyr | Met | Ser | Asp | Val 490 | Glu | Ala | Gly | Gly | Ala 495 | Thr |
| Val | Phe | Pro | Asp 500 | Leu | Gly | Ala | Ala | Ile 505 | Trp | Pro | Lys | Lys | Gly 510 | Thr | Ala |
| Val | Phe | Trp 515 | Tyr | Asn | Leu | Leu | Arg 520 | Ser | Gly | Arg | Arg | | | | |

<210> 725

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<211> 92
<212> PRT
<213> Homo sapiens
<400> 725
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His Glu Glu Ile Val Ser Gln Arg Leu Met Leu Leu Gln Gln Met Glu
                                25
Asn Lys Leu Gly Asp Gln His Thr Glu Lys Ala Ser Gln Leu Gln Thr
                             40
Val Glu Thr Ala Phe Lys Arg Asn Leu Ser Leu Leu Lys Asp Ile Glu
                         55
Ala Ala Glu Lys Ser Leu Gln Thr Arg Ile His Pro Leu Pro Arg Pro
                   70
                                        75
Glu Val Val Ser Leu Glu Thr Arg Tyr Trp Ala Ser
                 85
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<210> 726
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<212> PRT
<213> Homo sapiens
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<220>
<221> SITE
<222> (123)
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<220>

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| <22 | 2> (| 690) | | | | | | | | | | | | | |
| <22 | 3> X | aa e | qual | s any | y of | the | nati | ıral | ly o | ccur | ring | L-ar | nino | acio | is |
| | | | | | | | | | | | | | | | |
| <40 | 0> 7 | 26 | | | | | | | | | | | | | |
| Val | Ser | Arg | Ser | Pro | Arg | Val | Pro | Leu | Pro | Pro | Arg | Ser | Phe | Ser | Arg |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| | | | | | | | | | | | | | | | |
| Met | Äla | Gly | Asp | Ser | Thr | Ala | Thr | Ser | Arg | Arg | Leu | Gly | Ala | Ala | Pro |
| | | _ | 20 | | | | | 25 | _ | - | | - | 30 | | |
| | | | | | | | | | | | | | | | |
| Asp | Arg | Ala | Ala | Pro | His | Ile | Leu | Pro | Ala | Gly | Ala | His | Arg | Ala | Ala |
| • | | 35 | | | | | 40 | | | • | | 45 | _ | | |
| | | | | | | | | | | | | | | | |
| Thr | Ala | Pro | Glv | Leu | Glv | Glv | Glv | Pro | Glu | Pro | Leu | Glv | Arg | Ala | Leu |
| | 50 | | • | | - 2 | 55 | | | | | 60 | | | | |
| | | | | | | | | | | | | | | | |
| Ala | Glv | Glv | Leu | Ara | Glv | Pro | Gln | Glv | Asn | Glv | ጥተው | Leu | Gln | Glu | Ara |
| 65 | 1 | 1 | | | 70 | | | 1 | | 75 | | 200 | | | 80 |
| ••• | | | | | . • | | | | | | | | | | • |
| 1.vs | Ara | Ara | Cvs | Pro | Glv | T.eu | Δla | Glv | Cvs | Phe | Glu | Δla | Ile | Ser | Cue |
| -10 | 5 | | O, S | 85 | U 11 | Deu | | OLJ | 90 | 1 | 014 | ***** | 110 | 95 | C y S |
| | | | | 0.5 | | | | | ,, | | | | | ,, | |
| Glv | Thr | Glv | Lou | Glv | T an | Pro | Gly | t ou | λl - | Ι Αυ | V = = | 720 | Glu | Lou | 710 |
| Oly | 1111 | GLY | 100 | Gly | Leu | FIO | GLY | 105 | ALG | Leu | naa | ALG | 110 | Leu | 116 |
| | | | 100 | | | | | 103 | | | | | 110 | | |
| Sor | Trn | Gl v | בות | Dro | G1v | Sor | A 1 a |) CD | 505 | V | 7-0 | 7.011 | Leu | u; a | m~~ |
| Ser | пр | 115 | VIO | 110 | GIY | | 120 | vəħ | ser | лаа | ALG | 125 | Leu | птэ | ırþ |
| | | 113 | | | | • | 120 | | | | | 123 | | | |
| c1 | C0.* | uia | D=0 | mb- | * 1 a | Dho | 17-1 | 1101 | C | m | | | | | D |
| GLY | | HIS | PIO | THE | Ala | | vai | vai | ser | туг | | Ala | Ala | Leu | Pro |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| 11 - | ת 1 ת | 71 | T ou | m | uia | T | T | C1 | C | T | m | 11-1 | D=== | C1 | G1 |
| | Ala | Ala | Leu | ırþ | | гÀг | reu | GTÅ | ser | | тгр | val | Pro | GIÀ | _ |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| ~ 1 | a 1 | 01 | ~ | ~1 | | | | _ | | _ | _ | | _ | _ | |
| GIN | GIA | GTÅ | ser | | ASN | Pro | vaı | Arg | | Leu | Leu | GTA | Cys | | GIY |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| _ | | | | | | _ | | _ | | _ | | | _ | | |
| Ser | GLu | Thr | | Arg | Leu | Ser | Leu | | Leu | Val | Leu | Val | Val | Leu | Ser |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| | | | | | | | | | | | | | | | |
| Ser | Leu | Gly | Glu | Met | Ala | Ile | Pro | Phe | Phe | Thr. | Gly | Arg | Leu | Thr | Asp |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| | | | | | | | | | | | | | | | |
| Trp | Ile | Leu | Gln | Asp | Gly | Ser | Ala | Asp | Thr | Phe | Thr | Arg | Asn | Leu | Thr |
| | 210 | | | | | 215 | | | | | 220 | | | | |
| | | | | | | | | | | | | | | | |
| Leu | Met | Ser | Ile | Leu | Thr | Ile | Ala | Ser | Ala | Val | Leu | Glu | Phe | Val | Gly |
| 225 | | | | | 230 | | | | | 235 | | | | | 240 |

| пор | GIY | 116 | ıyı | 245 | ASII | 1112 | net. | GIY | 250 | Val | HIS | ser | птэ | 255 | GIN |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Gly | Glu | Val | Phe 260 | | Ala | Val | Leu | Arg 265 | Gln | Glu | Thr | Glu | Phe 270 | Phe | Gln |
| Gln | Asn | Gln 275 | Thr | Gly | Asn | Ile | Met 280 | Ser | Arg | Val | Thr | Glu 285 | Asp | Thr | Ser |
| Thr | Leu 290 | Ser | Asp | Ser | Leu | Ser 295 | Glu | Asn | Leu | Ser | Leu 300 | Phe | Leu | Trp | Туr |
| Leu 305 | Val | Arg | Gly | Leu | Cys 310 | Leu | Leu | Gly | Ile | Met 315 | Leu | Trp | Gly | Ser | Val 320 |
| Ser | Leu | Thr | Met | Val 325 | Thr | Leu | Ile | Thr | Leu 330 | Pro | Leu | Leu | Phe | Leu 335 | Leu |
| | | | 340 | | Lys | | | 345 | | | | | 350 | | |
| | | 355 | | | Ser | | 360 | | | | | 365 | | | |
| | 370 | | | | Ser | 375 | | | | | 380 | | | | |
| 385 | | | | | Gln 390 | | | | | 395 | | | | | 400 |
| | | | | 405 | Asn | | | | 410 | | | | | 415 | |
| | | | 420 | | Leu | | | 425 | | | | | 430 | | |
| | | 435 | | | Asn | | 440 | | | | | 445 | | | |
| | 450 | | | | Glu | 455 | | | | | 460 | | | | |
| 465 | | | | | Ser 470 | | | | | 475 | | | | | 480 |
| | | | | 485 | Ser | | | | 490 | | | | | 495 | |
| ren | vai | CIU | Phe 500 | GIN | Asp | vaı | | Phe 505 | Ala | Tyr | Pro | Asn | Arg | Pro | Asp |

Val Leu Val Leu Gln Gly Leu Thr Phe Thr Leu Arg Pro Gly Glu Val 515 520 Thr Ala Leu Val Gly Pro Asn Gly Ser Gly Lys Ser Thr Val Ala Ala 530 535 Leu Leu Gln Asn Leu Tyr Gln Pro Thr Gly Gly Gln Leu Leu Leu Asp 550 Gly Lys Pro Leu Pro Gln Tyr Glu His Arg Tyr Leu His Arg Gln Val 570 Ala Ala Val Gly Gln Glu Pro Gln Val Phe Gly Arg Ser Leu Gln Glu 580 585 Asn Ile Ala Tyr Gly Leu Thr Gln Lys Pro Thr Met Glu Glu Ile Thr 600 Ala Ala Ala Val Lys Ser Gly Ala His Ser Phe Ile Ser Gly Leu Pro 610 615 Gln Gly Tyr Asp Thr Glu Val Asp Glu Ala Gly Ser Gln Leu Ser Gly 630 Gly Gln Arg Gln Ala Val Ala Leu Ala Arg Ala Leu Ile Arg Lys Pro 645 650 Cys Val Leu Ile Leu Asp Asp Ala Thr Ser Ala Leu Asp Ala Asn Ser 660 665 Gln Leu Gln Val Glu Gln Leu Leu Tyr Glu Ser Pro Glu Arg Tyr Xaa 680 Arg Xaa 690 <210> 727 <211> 82 <212> PRT <213> Homo sapiens

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Thr Pro Pro Leu Val Ser Ser Val Ala Ala Leu Asp Ser His Arg Ser
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                                                          15
Thr Asn Pro Ile Val Asn Ser Ala Cys Lys Gly Ser Arg Leu Cys Ala
Pro Tyr Glu Asn Leu Met Pro Asp Asp Leu Arg Xaa Asn Ser Phe Ile
                             40
Leu Lys Pro Pro Phe Thr Leu Gln Ser Val Glu Lys Leu Ser Ser Thr
                         55
Lys Leu Val Pro Gly Ala Lys Asn Xaa Gly Asp Arg Cys Ser Arg Glu
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Arg Ser
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| | | | qual: | s an | y of | the | natı | aral: | Ly o | ccur | ring | L-ar | nino | acio | is |
| | 0> 7: Arg | | Lys | Pro 5 | Arg | Val | Arg | Gly | Thr 10 | Xaa | Val | Arg | Thr | Pro 15 | Gly |
| Ser | Arg | Arg | Gly 20 | Arg | His | Gly | Ala | Val 25 | Pro | Gly | Asp | Trp | Glu 30 | Ala | Ala |
| Ala | Gln | Ala 35 | Arg | Gly | Ala | Gly | Gln 40 | Arg | Leu | Pro | Thr | Pro 45 | Ser | Glu | Ile |
| Leu | Ser 50 | Asn | Ala | Gly | Leu | Arg 55 | Phe | Glu | Val | Val | Pro 60 | Ser | Lys | Phe | Lys |
| Glu 65 | Lys | Leu | Asp | Lys | Ala 70 | Ser | Phe | Ala | Thr | Pro 75 | Tyr | Gly | Tyr | Ala | Met 80 |
| Glu | Thr | Ala | Lys | Gln 85 | Lys | Ala | Leu | Glu | Val 90 | Ala | Asn | Arg | Leu | Tyr 95 | Gln |
| Lys | Asp | Leu | Arg 100 | Ala | Pro | Asp | Val | Val 105 | Ile | Gly | Ala | Asp | Thr 110 | Ile | Val |
| Thr | Val | Gly 115 | Gly | Leu | Ile | Leu | Glu 120 | Lys | Pro | Val | Asp | Lys 125 | Gln | Asp | Ala |
| туr | Arg 130 | Met | Leu | Ser | Arg | Leu 135 | Ser | Gly | Arg | Glu | His 140 | Ser | Val | Phe | Thr |
| Gly 145 | Val | Ala | Ile | Val | His 150 | Cys | Ser | Ser | Lys | Asp 155 | His | Gln | Leu | Asp | Thr 160 |
| Arg | Val | Ser | Glu | Phe 165 | Tyr | Glu | Glu | Thr | Lys 170 | Val | Lys | Phe | Ser | Glu 175 | Leu |
| Ser | Glu | Glu | Leu 180 | Leu | Trp | Glu | Tyr | Val 185 | His | Ser | Gly | Glu | Pro 190 | Met | Asp |
| Lys | Ala | Gly 195 | Gly | Tyr | Gly | Ile | Gln 200 | Ala | Leu | Gly | Gly | Met 205 | Leu | Val | Glu |
| Ser | Val 210 | His | Gly | Asp | Phe | Leu 215 | Asn | Val | Val | Gly | Phe 220 | Pro | Leu | Asn | His |
| Phe 225 | Cys | Lys | Gln | Leu | Val 230 | Lys | Leu | туг | Tyr | Pro 235 | Pro | Arg | Pro | Glu | Asp 240 |
| Leu | Arg | Arg | Ser | Val 245 | Lys | His | Asp | Ser | Ile 250 | Pro | Ala | Ala | Asp | Thr 255 | Phe |

| Glu | Asp | Leu | Ser 260 | Asp | Val | Glu | Gly | Gly 265 | Gly | Ser | Glu | Pro | Thr 270 | Gln | Arg |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-------------|------------|------------|
| Asp | Ala | Gly 275 | Ser | Arg | Asp | Glu | Lys 280 | Ala | Glu | Ala | Gly | Glu 285 | Ala | Gly | Gln |
| Ala | Thr 290 | Ala | Glu | Ala | Glu | Cys 295 | His | Arg | Thr | Arg | Glu 300 | Thr | Leu | Pro | Pro |
| Phe 305 | Pro | Thr | Arg | Leu | Leu 310 | Glu | Leu | Ile | Glu | Gly 315 | Phe | Met | Leu | Ser | Lys 320 |
| Gly | Leu | Leu | Thr | Ala 325 | Cys | Lys | Leu | Lys | Val 330 | Phe | Asp | Leu | Leu | Lys 335 | Asp |
| Glu | Ala | Pro | Gln 340 | Lys | Ala | Ala | Asp | 11e 345 | Ala | Ser | Lys | Val | Asp 350 | Ala | Ser |
| Ala | Cys | Gly 355 | Met | Glu | Arg | Leu | Leu 360 | Asp | Ile | Cys | Ala | Ala 365 | Met | Gly | Leu |
| Leu | Glu 370 | Lys | Thr | Glu | Gln | Gly 375 | Tyr | Ser | Asn | Thr | Glu 380 | Thr | Ala | Asn | Val |
| Туг 385 | Leu | Ala | Ser | Asp | Gly 390 | Glu | Туr | Ser | Leu | His 395 | Gly | Phe | Ile | Met | His 400 |
| Asn | Asn | Asp | Leu | Thr 405 | Trp | Asn | Leu | Phe | Thr 410 | Туr | Leu | Glu | Phe | Ala 415 | Ile |
| Arg | Glu | Gly | Thr 420 | Asn | Gln | His | His | Arg 425 | Ala | Leu | Gly | Lys | Lys ,430 | Ala | Glu |
| Asp | Leu | Phe 435 | | Asp | Ala | Tyr | Tyr 440 | Gln | Ser | Pro | Glu | Thr 445 | Arg | Leu | Arg |
| Phe | Met 450 | Arg | Ala | Met | His | Gly 455 | Met | Thr | Lys | Leu | Thr 460 | Ala | Cys | Gln | Val |
| Ala 465 | Thr | Ala | Phe | Asn | Leu 470 | Ser | Arg | Phe | Ser | Ser 475 | Ala | Cys | Asp | Xaa | Gly 480 |
| Gly | Cys | Thr | Gly | Aļa 485 | Leu | Ala | Arg | Glu | Leu 490 | Ala | Arg | Glu | Tyr | Pro 495 | Arg |
| Met | Gln | Val | Thr 500 | Val | Phe | Asp | Leu | Pro 505 | Asp | Ile | Ile | Glu | Leu 510 | Ala | Ala |
| His | Phe | Gln 515 | Pro | Pro | Gly | Pro | Gln | Gln | Cys | Arg | Ser | Thr | Ser | Gln | Gln |

WO 00/55173

710

PCT/US00/05881

Val Thr Phe Ser Gly Thr Pro Ser Pro Ala Leu Ser Cys Thr Ser Cys 535 Ala Gly Ser Cys Met Xaa Gly Gln Thr Thr Lys Ser Thr Ser Tyr Ser 555 Ala Gly Ser Pro Arg Ala Ala Ser Gln Gly Pro Ala Cys Cys Trp Trp 565 570 Arg Arg Ser Trp Met Arg Arg Arg Gly Trp Arg Xaa Arg Xaa Asp Ala 585 Val Thr Glu His Ala Gly Ala Asp 595 <210> 729 <211> 535 <212> PRT <213> Homo sapiens Gly Arg Ser Ser Phe Thr Ser Leu Val Val Gly Val Phe Val Val Tyr 5 10 Val Val His Thr Cys Trp Val Met Tyr Gly Ile Val Tyr Thr Arg Pro Cys Ser Gly Asp Ala Asn Cys Ile Gln Pro Tyr Leu Ala Arg Arg Pro 35 40 Lys Leu Gln Leu Ser Val Tyr Thr Thr Thr Arg Ser His Leu Gly Ala 55 Glu Asn Asn Ile Asp Leu Val Leu Asn Val Glu Asp Phe Asp Val Glu 70

Asn Asn Gly Thr Leu Tyr Ala Tyr Ile Phe Leu His His Ala Gly Val

Ser Lys Phe Glu Arg Thr Val Asn Val Ser Val Pro Lys Lys Thr Arg

85

Leu Pro Trp His Asp Gly Lys Gln Val His Leu Val Ser Pro Leu Thr 115 120 125

Thr Tyr Met Val Pro Lys Pro Glu Glu Ile Asn Leu Leu Thr Gly Glu 130 135 140

| Ser 145 | Asp | Thr | GIn | GIn | 11e 150 | Glu | Ala | Glu | Lys | Lys 155 | Pro | Thr | Ser | Ala | 160 |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Asp | Glu | Pro | Val | Ser 165 | His | Trp | Arg | Pro | Arg 170 | Leu | Ala | Leu | Asn | Val 175 | Met |
| Ala | Asp | Asn | Phe 180 | Val | Phe | Asp | Gly | Ser 185 | Ser | Leu | Pro | Ala | Asp 190 | Val | His |
| Arg | туr | Met 195 | Lys | Met | Ile | Gln | Leu 200 | Gly | Lys | Thr | Val | His 205 | Tyr | Leu | Pro |
| Ile | Leu 210 | Phe | Ile | Asp | Gln | Leu 215 | Ser | Asn | Arg | Val | Lys 220 | Asp | Leu | Met | Val |
| Ile 225 | Asn | Arg | Ser | Thr | Thr 230 | Glu | Leu | Pro | Leu | Thr 235 | Val | Ser | Tyr | Asp | Lys 240 |
| Val | Ser | Leu | Gly | Arg 245 | Leu | Arg | Phe | Trp | 11e 250 | His | Met | Gln | Asp | Ala 255 | Val |
| Tyr | Ser | Leu | Gln 260 | Gln | Phe | Gly | Phe | Ser 265 | Glu | Lys | Asp | Ala | Asp 270 | Glu | Val |
| | | 275 | | | | | 280 | | | | Leu | 285 | | | |
| | 290 | | | | | 295 | | | | | 100 300 | | | | |
| 305 | | | | _ | 310 | _ | _ | _ | | 315 | Ile | _ | | | 320 |
| _ | | | | 325 | | | | | 330 | | Val | | | 335 | |
| | | - | 340 | | | | | 345 | | | Val | | 350 | • | |
| | | 355 | | | | | 360 | | • | | Ala | 365 | | | |
| | 370 | | | _ | | 375 | | | | | Phe 380 | _ | | | |
| 385 | | | | | 390 | | | | | 395 | Gln | | | | 400 |
| Leu | ser | Tyr | Leu | Leu 405 | ryr | Pro | ren | cys | Val 410 | GTÅ | Gly | ATS | val | Tyr 415 | ser |

712

Leu Leu Asn Ile Lys Tyr Lys Ser Trp Tyr Ser Trp Leu Ile Asn Ser 420 425 430

Phe Val Asn Gly Val Tyr Ala Phe Gly Phe Leu Phe Met Leu Pro Gln 435 440 445

Leu Phe Val Asn Tyr Lys Leu Lys Ser Val Ala His Leu Pro Trp Lys 450 455 460

Ala Phe Thr Tyr Lys Ala Phe Asn Thr Phe Ile Asp Asp Val Phe Ala 465 470 475 480

Phe Ile Ile Thr Met Pro Thr Ser His Arg Leu Ala Cys Phe Arg Asp
485 490 495

Asp Val Val Phe Leu Val Tyr Leu Tyr Gln Arg Trp Leu Tyr Pro Val 500 505 510

Asp Lys Arg Arg Val Asn Glu Phe Gly Glu Ser Tyr Glu Glu Lys Ala 515 520 525

Thr Arg Ala Pro His Thr Asp 530 535

<210> 730

<211> 288

<212> PRT

<213> Homo sapiens

<400> 730

Arg Pro Ala Gly Val Thr Glu Leu Gln Pro Arg Ala Pro Gly Gly Gly 1 5 10 15

Gly Met Glu Ala Ala Ala Glu Pro Gly Asn Leu Ala Gly Val Arg His
20 25 30

Ile Ile Leu Val Leu Ser Gly Lys Gly Gly Val Gly Lys Ser Thr Ile 35 40 45

Ser Thr Glu Leu Ala Leu Ala Leu Arg His Ala Gly Lys Lys Val Gly 50 60

Ile Leu Asp Val Asp Leu Cys Gly Pro Ser Ile Pro Arg Met Leu Gly 65 70 75 80

Ala Gln Gly Arg Ala Val His Gln Cys Asp Arg Gly Trp Ala Pro Val 85 90 95

Phe Leu Asp Arg Glu Gln Ser Ile Ser Leu Met Ser Val Gly Phe Leu

713

100 105 110 Leu Glu Lys Pro Asp Glu Ala Val Val Trp Arg Gly Pro Lys Lys Asn 115 120 Ala Leu Ile Lys Gln Phe Val Ser Asp Val Ala Trp Gly Glu Leu Asp 135 Tyr Leu Val Val Asp Thr Pro Pro Gly Thr Ser Asp Glu His Met Ala 150 155 Thr Ile Glu Ala Leu Arg Pro Tyr Gln Pro Leu Gly Ala Leu Val Val 165 170 Thr Thr Pro Gln Ala Val Ser Val Gly Asp Val Arg Arg Glu Leu Thr 180 185 Phe Cys Arg Lys Thr Gly Leu Arg Val Met Gly Ile Val Glu Asn Met 200 Ser Gly Phe Thr Cys Pro His Cys Thr Glu Cys Thr Ser Val Phe Ser 210 215 Arg Gly Gly Glu Glu Leu Ala Gln Leu Ala Gly Val Pro Phe Leu 230 235 Gly Ser Val Pro Leu Asp Pro Ala Leu Met Arg Thr Leu Glu Glu Gly 245 250 His Asp Phe Ile Gln Glu Phe Pro Gly Ser Pro Ala Phe Ala Ala Leu 260 265 Thr Ser Ile Ala Gln Lys Ile Leu Asp Ala Thr Pro Ala Cys Leu Pro

<210> 731

<211> 737

<212> PRT

<213> Homo sapiens

<400> 731

Asp Gln Leu Cys Gly Pro Gln Thr Tyr Lys Glu His Leu Glu Gly Gln
1 5 10 15

280

Lys His Lys Lys Glu Ala Ala Leu Lys Ala Ser Gln Asn Thr Ser 20 25 30

Ser Ser Asn Ser Ser Thr Arg Gly Thr Gln Asn Gln Leu Arg Cys Glu

Leu Cys Asp Val Ser Cys Thr Gly Ala Asp Ala Tyr Ala Ala His Ile 50 55 60

Arg Gly Ala Lys His Gln Lys Val Val Lys Leu His Thr Lys Leu Gly
65 70 75 80

Lys Pro Ile Pro Ser Thr Glu Pro Asn Val Val Ser Gln Ala Thr Ser 85 90 95

Ser Thr Ala Val Ser Ala Ser Lys Pro Thr Ala Ser Pro Ser Ser Ile 100 105 110

Ala Ala Asn Asn Cys Thr Val Asn Thr Ser Ser Ile Ala Thr Ser Ser 115 120 125

Met Lys Gly Leu Thr Thr Gly Asn Ser Ser Leu Asn Ser Thr Ser 130 135 140

Asn Thr Lys Val Ser Ala Val Pro Thr Asn Met Ala Ala Lys Lys Thr 145 150 155 160

Ser Thr Pro Lys Ile Asn Phe Val Gly Gly Asn Lys Leu Gln Ser Thr 165 170 175

Gly Asn Lys Ala Glu Asp Thr Lys Gly Thr Glu Cys Val Lys Ser Thr 180 .185 .190

Pro Val Thr Ser Ala Val Gln Ile Pro Glu Val Lys Gln Asp Thr Val 195 200 205

Ser Glu Pro Val Thr Pro Ala Ser Leu Ala Ala Leu Gln Ser Asp Val 210 215 220

Gln Pro Val Gly His Asp Tyr Val Glu Glu Val Arg Asn Asp Glu Gly 225 230 235 240

Lys Val Ile Arg Phe His Cys Lys Leu Cys Glu Cys Ser Phe Asn Asp 245 250 255

Pro Asn Ala Lys Glu Met His Leu Lys Gly Arg Arg His Arg Leu Gln
260 265 270

Tyr Lys Lys Lys Val Asn Pro Asp Leu Gln Val Glu Val Lys Pro Ser 275 280 285

Ile Arg Ala Arg Lys Ile Gln Glu Glu Lys Met Arg Lys Gln Met Gln 290 295 300

| Lys 305 | Glu | Glu | туr | Trp | Arg 310 | Arg | Arg | Glu | Glu | Glu 315 | Glu | Arg | Trp | Arg | Met 320 |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Glu | Met | Arg | Arg | Туг 325 | Glu | Glu | Asp | Met | туr 330 | Trp | Arg | Arg | Met | Glu 335 | Glu |
| Glu | Gln | His | His 340 | Trp | Asp | Asp | Arg | Arg 345 | Arg | Met | Pro | Asp | Gly 350 | Gly | Tyr |
| Pro | His | Gly 355 | Pro | Pro | Gly | Pro | Leu 360 | Gly | Leu | Leu | Gly | Val 365 | Arg | Pro | Gly |
| Met | Pro 370 | Pro | Gln | Pro | Gln | Gly 375 | Pro | Ala | Pro | Leu | Arg 380 | Arg | Pro | Asp | Ser |
| Ser 385 | | Asp | Arg | Tyr | Val 390 | Met | Thr | Lys | His | Ala 395 | Thr | Ile | Tyr | Pro | Thr 400 |
| Glu | Glu | Glu | Leu | Gln 405 | Ala | Val | Gln | Lys | 11e 410 | Val | Ser | Ile | Thr | Glu 415 | Arg |
| Ala | Leu | Lys | Leu 420 | Val | Ser | Asp | Ser | Leu 425 | Ser | Glu | His | Glu | Lys 430 | Asn | Lys |
| Asn | Lys | Glu 435 | Gly | Asp | Asp | Lys | Lys 440 | Glu | Gly | Gly | Lys | Asp 445 | Arg | Ala | Leu |
| Lys | Gly 450 | Val | Leu | Arg | Val | Gly 455 | Val | Leu | Ala | Lys | Gly 460 | Leu | Leu | Leu | Arg |
| Gly 465 | Asp | Arg | Asn | Val | Asn 470 | Leu | Val | Leu | Leu | Cys 475 | Ser | Glu | Lys | Pro | Ser 480 |
| Lys | Thr | Leu | Leu | Ser 485 | Arg | Ile | Ala | Glu | Asn 490 | Leu | Pro | Lys | Gln | Leu 495 | Ala |
| Val | Ile | Ser | Pro 500 | Glu | Lys | Tyr | Asp | Ile 505 | Lys | Cys | Ala | Val | Ser 510 | Glu | Ala |
| Ala | Ile | 11e 515 | Leu | Asn | Ser | Cys | Val 520 | Glu | Pro | Lys | Met | Gln 525 | Val | Thr | Ile |
| Thr | Leu 530 | Thr | Ser | Pro | Ile | Ile 535 | Arg | Glu | Glu | Asn | Met 540 | Arg | Glu | Gly | Asp |
| Val 545 | Thr | Ser | Gly | Met | Val 550 | Lys | Asp | Pro | Pro | Asp 555 | Val | Leu | Asp | Arg | Gln 560 |
| Lys | Cys | Leu | Asp | Ala 565 | Leu | Ala | Ala | Leu | Arg 570 | His | Ala | Lys | Trp | Phe 575 | Gln |

716

Ala Arg Ala Asn Gly Leu Gln Ser Cys Val Ile Ile Ile Arg Ile Leu 585 Arg Asp Leu Cys Gln Arg Val Pro Thr Trp Ser Asp Phe Pro Ser Trp 600 Ala Met Glu Leu Leu Val Glu Lys Ala Ile Ser Ser Ala Ser Ser Pro 615 620 Gln Ser Pro Gly Asp Ala Leu Arg Arg Val Phe Glu Cys Ile Ser Ser 630 635 Gly Ile Ile Leu Lys Gly Ser Pro Gly Leu Leu Asp Pro Cys Glu Lys 645 650 Asp Pro Phe Asp Thr Leu Ala Thr Met Thr Asp Gln Gln Arg Glu Asp 665 Ile Thr Ser Ser Ala Gln Phe Ala Leu Arg Leu Leu Ala Phe Arg Gln 680 Ile His Lys Val Leu Gly Met Asp Pro Leu Pro Gln Met Ser Gln Arg 695 Phe Asn Ile His Asn Asn Arg Lys Arg Arg Arg Asp Ser Asp Gly Val 715 Asp Gly Phe Glu Ala Glu Gly Lys Lys Asp Lys Lys Asp Tyr Asp Asn 730 Phe <210> 732 <211> 106 <212> PRT <213> Homo sapiens Gly Arg Gly Leu Asn Ser Pro Lys Glu Leu Arg Pro Leu Thr Arg Ala

Ala Pro Ala Ala Ala Cys Thr Gly Pro Gly Ala Ala Met Pro Lys

Cys Pro Lys Cys Asn Lys Glu Val Tyr Phe Ala Glu Arg Val Thr Ser 35 40 45

Leu Gly Lys Asp Trp His Arg Pro Cys Leu Lys Cys Glu Lys Cys Gly 50 55 60

Lys Thr Leu Thr Ser Gly Gly His Ala Glu His Glu Gly Lys Pro Tyr 65 70 75 80

Cys Asn His Pro Cys Tyr Ala Ala Met Phe Gly Pro Lys Gly Phe Gly 85 90 95

Arg Gly Gly Ala Glu Ser His Thr Phe Lys 100 105

<210> 733

<211> 230

<212> PRT

<213> Homo sapiens

<400> 733

Ala Ser Cys Leu Gln Ser Val Ala Ser Ala Cys Ala Ser Phe Pro Ala 1 5 10 15

Pro Ser Trp Arg Gly Thr Arg Lys Arg Asn Ala Thr Asp Arg Val Thr 20 25 30

Gln Cys Lys Tyr Lys Arg Ile Gly Cys Pro Trp His Gly Pro Phe His 35 40 45

Glu Leu Thr Val His Glu Ala Ala Cys Ala His Pro Thr Lys Thr Gly
50 55 60

Ser Glu Leu Met Glu Ile Leu Asp Gly Met Asp Gln Ser His Arg Lys 65 70 75 80

Glu Met Gln Leu Tyr Asn Ser Ile Phe Ser Leu Leu Ser Phe Glu Lys 85 90 95

Ile Gly Tyr Thr Glu Val Gln Phe Arg Pro Tyr Arg Thr Asp Asp Phe
100 105 110

Ile Thr Arg Leu Tyr Tyr Glu Thr Pro Arg Phe Thr Val Leu Asn Gln
115 120 125

Thr Trp Val Leu Lys Ala Arg Val Asn Asp Ser Glu Arg Asn Pro Asn 130 135 140

Leu Ser Cys Lys Arg Thr Leu Ser Phe Gln Leu Leu Leu Lys Ser Lys 145 150 155 160

Val Thr Ala Pro Leu Glu Cys Ser Phe Leu Leu Leu Lys Gly Pro Tyr

718

165 170 175 Asp Asp Val Arg Ile Ser Pro Val Ile Tyr His Phe Val Phe Thr Asn 180 185 Glu Ser Asn Glu Thr Asp Tyr Val Pro Leu Pro Ile Ile Asp Ser Val 195 200 Glu Cys Asn Lys Leu Leu Ala Ala Lys Asn Ile Asn Leu Arg Leu Phe . 215 Leu Phe Gln Ile Gln Lys 225 <210> 734 <211> 222 <212> PRT . <213> Homo sapiens <220> <221> SITE <222> (18) <223> Xaa equals any of the naturally occurring L-amino acids Gly Arg Pro Ala Pro Pro Ala Ala Arg Ala Gly Ala His Ser Arg Gly Ala Xaa Ala Pro Pro Ala Ala Ile Asp Met Met Phe Pro Gln Ser Arg His Ser Gly Ser Ser His Leu Pro Gln Gln Leu Lys Phe Thr Thr Ser 35 Asp Ser Cys Asp Arg Ile Lys Asp Glu Phe Gln Leu Leu Gln Ala Gln Tyr His Ser Leu Lys Leu Glu Cys Asp Lys Leu Ala Ser Glu Lys Ser 70 75 Glu Met Gln Arg His Tyr Val Met Tyr Tyr Glu Met Ser Tyr Gly Leu 85 90 Asn Ile Glu Met His Lys Gln Ala Glu Ile Val Lys Arg Leu Asn Gly

Ile Cys Ala Gln Val Leu Pro Tyr Leu Ser Gln Glu His Gln Gln 115 120 125

Val Leu Gly Ala Ile Glu Arg Ala Lys Gln Val Thr Ala Pro Glu Leu 130 135 140 Asn Ser Ile Ile Arg Gln Gln Leu Gln Ala His Gln Leu Ser Gln Leu 150 Gln Ala Leu Ala Leu Pro Leu Thr Pro Leu Pro Val Gly Leu Gln Pro 170 Pro Ser Leu Pro Ala Val Ser Ala Gly Thr Gly Leu Leu Ser Leu Ser Ala Leu Gly Ser Gln Ala His Leu Ser Lys Glu Asp Lys Asn Gly His 200 Asp Gly Asp Thr His Gln Glu Asp Asp Gly Glu Lys Ser Asp 215 <210> 735 <211> 248 <212> PRT <213> Homo sapiens <400> 735 Gly Thr Ser Asp Met Glu Leu Phe Leu Ala Gly Arg Arg Val Leu Val Thr Gly Ala Gly Lys Gly Ile Gly Arg Gly Thr Val Gln Ala Leu His 20 25 Ala Thr Gly Ala Arg Val Val Ala Val Ser Arg Thr Gln Ala Asp Leu Asp Ser Leu Val Arg Glu Cys Pro Gly Ile Glu Pro Val Cys Val Asp 55 60 Leu Gly Asp Trp Glu Ala Thr Glu Arg Ala Leu Gly Ser Val Gly Pro Val Asp Leu Leu Val Asn Asn Ala Ala Val Ala Leu Leu Gln Pro Phe 90 Leu Glu Val Thr Lys Glu Ala Phe Asp Arg Ser Phe Glu Val Asn Leu 100 105

Arg Ala Val Ile Gln Val Ser Gln Ile Val Ala Arg Gly Leu Ile Ala 115 120 125

Arg Gly Val Pro Gly Ala Ile Val Asn Val Ser Ser Gln Cys Ser Gln

720

140

135

130

Arg Ala Val Thr Asn His Ser Val Tyr Cys Ser Thr Lys Gly Ala Leu 150 155 Asp Met Leu Thr Lys Val Met Ala Leu Glu Leu Gly Pro His Lys Ile Arg Val Asn Ala Val Asn Pro Thr Val Val Met Thr Ser Met Gly Gln 185 Ala Thr Trp Ser Asp Pro His Lys Ala Lys Thr Met Leu Asn Arg Ile Pro Leu Gly Lys Phe Ala Glu Val Glu His Val Val Asn Ala Ile Leu 215 Phe Leu Leu Ser Asp Arg Ser Gly Met Thr Thr Gly Ser Thr Leu Pro 230 Val Glu Gly Gly Phe Trp Ala Cys 245 <210> 736 <211> 216 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (61) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (68) <223> Xaa equals any of the naturally occurring L-amino acids <400> 736 Arg Leu Leu Phe Arg Val Arg Lys Arg Met Ile Ser Phe Ser Ala Pro Pro Leu Met Leu Pro Phe Ser Phe Tyr Phe Phe Val Phe Pro Val Ala 20 25 Arg Thr Ala Arg Lys Arg Lys Pro Ser Pro Glu Pro Glu Gly Glu Val

Gly Pro Pro Lys Ile Asn Gly Glu Ala Gln Pro Trp Xaa Ser Thr Ser

721

50 55 60 Thr Glu Gly Xaa Lys Ile Pro Met Thr Pro Thr Ser Ser Phe Val Ser 70 Pro Pro Pro Pro Thr Ala Ser Pro His Ser Asn Arg Thr Thr Pro Pro 90 Glu Ala Ala Gln Asn Gly Gln Ser Pro Met Ala Ala Leu Ile Leu Val 105 Ala Asp Asn Ala Gly Gly Ser His Ala Ser Lys Asp Ala Asn Gln Val 120 His Ser Thr Thr Arg Arg Asn Ser Asn Ser Pro Pro Ser Pro Ser Ser 135 Met Asn Gln Arg Arg Leu Gly Pro Arg Glu Val Gly Gln Gly Ala 150 155 Gly Asn Thr Gly Gly Leu Glu Pro Val His Pro Ala Ser Leu Pro Asp 170 Phe Ser Leu Ala Thr Ser Ala Pro Leu Cys Cys Thr Leu Cys His Glu 185 Arg Leu Glu Asp Asn His Phe Val Gln Cys Arg Pro Ser Phe Asp Lys 195 Phe Ser Ser Leu Leu Arg Gln Arg 210 215 <210> 737 <211> 317 <212> PRT <213> Homo sapiens <400> 737 Arg Pro Thr Arg Pro Glu Val Met Met Thr Lys Tyr Ser Asn Leu Ser 10 Leu Glu Ser His Asn Phe Ser Leu Thr Ala Ser Pro Leu Thr Ser Leu 25 Pro Ile Pro Glu Val Met Met Thr Lys Tyr Ser Asn Leu Phe Leu Glu

40

55

Ser His Asn Ile Ser Leu Thr Glu His Ser Ser Val Pro Val Glu Lys

60

35

| Asn 65 | Ile | Thr | Leu | Glu | Arg 70 | Pro | Ser | Ala | Val | Glu 75 | Leu | Thr | Cys | Gln | Phe 80 |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Thr | Thr | Ser | Gly | Asp 85 | Val | Asn | Ser | Val | Asn 90 | Val | Thr | Trp | Lys | Lys 95 | Gly |
| Asp | Glu | Gln | Leu 100 | Lys | Asn | Tyr | His | Val 105 | Ser | Ala | Thr | Glu | Gly 110 | Ile | Leu |
| Tyr | Thr | Gln 115 | Tyr | Lys | Phe | Ser | Ile 120 | Ile | Asn | Ser | Glu | Gln 125 | Leu | Gly | Ser |
| туr | Ser 130 | Cys | Phe | Phe | Glu | Glu 135 | Glu | Lys | Glu | Arg | Arg 140 | Gly | Thr | Phe | Asn |
| Phe 145 | Gly | Val | Pro | Glu | Val 150 | Gln | Arg | Lys | Asn | Lys 155 | Pro | Leu | Ile | Thr | Туг 160 |
| Val | Gly | Asp | Ser | Val 165 | Val | Leu | Val | Cys | Lys 170 | Cys | Arg | His | Cys | Ala 175 | Pro |
| Leu | Asn | Trp | Thr 180 | Trp | Tyr | Ser | Gly | Asn 185 | Arg | Ser | Val | Gln | Val 190 | Pro | Leu |
| Asp | Val | His 195 | Met | Asn | Glu | Lys | Tyr 200 | Ala | Ile | Asn | Gly | Thr 205 | Asn | Ala | Asn |
| Glu | Thr 210 | Arg | Leu | Lys | Ile | Met 215 | Gln | Leu | Ser | Glu | Asp 220 | Asp | Lys | Gly | Ser |
| Tyr 225 | Trp | Cys | His | Ala | Met 230 | Phe | Gln | Leu | Gly | Glu 235 | Ser | Gln | Glu | Ser | Val 240 |
| | | | | 245 | | | | Val | 250 | | | | | 255 | |
| Ile | Val | Val | Glu 260 | Val | Ile | Leu | Leu | Val 265 | Ala | Ile | Ile | Leu | Phe 270 | Cys | Glu |
| | | 275 | | | | | 280 | His | | | | 285 | | | |
| | 290 | | | | | 295 | | Asp | | | 300 | | Ile | Glu | Asn |
| Asn 305 | Ala | Pro | Arg | His | Arg 310 | Lys | Asn | Glu | Ala | Met 315 | Ser | Gln | | | |

<210> 738 <211> 67 <212> PRT <213> Homo sapiens <400> 738 Ala Arg Val Ala Ser Asp Pro Phe Phe Arg His Tyr Arg Gln Leu Asn Glu Lys Leu Val Gln Leu Ile Glu Asp Tyr Ser Leu Val Ser Phe Ile 25 Pro Leu Asn Ile Gln Asp Lys Glu Ser Ile Gln Arg Val Leu Gln Ala 40 Val Asp Lys Ala Asn Gly Tyr Cys Phe Gly Ala Gln Glu Gln Arg Thr 50 55 Trp Lys Pro 65 <210> 739 <211> 142 <212> PRT <213> Homo sapiens <400> 739 Ser Gln Gln Pro Arg Ile Met Ser Lys Leu Gly Arg Ala Ala Arg Gly Leu Arg Lys Pro Glu Val Gly Gly Val Ile Arg Ala Ile Val Arg Ala 25 Gly Leu Ala Met Pro Gly Pro Pro Leu Gly Pro Val Leu Gly Gln Arg 35 40 Gly Val Ser Ile Asn Gln Phe Cys Lys Glu Phe Asn Glu Arg Thr Lys Asp Ile Lys Glu Gly Ile Pro Leu Pro Thr Lys Ile Leu Val Lys Pro 70 75 Asp Arg Thr Phe Glu Ile Lys Ile Gly Gln Pro Thr Val Ser Tyr Phe 85 Leu Lys Ala Ala Ala Gly Ile Glu Lys Gly Ala Arg Gln Thr Gly Lys 105

Glu Val Ala Gly Leu Val Thr Leu Lys His Val Tyr Glu Ile Ala Arq

115 120 125

Ile Lys Ala Gln Asp Glu Ala Phe Ala Cys Arg Met Tyr Pro 130 135 140

<210> 740

<211> 485

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (12)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 740

Trp Pro Ala Val Ala Val Arg Phe Thr Ala Leu Xaa Leu Gly Phe Gly
1 5 10 15

Asp Ala Val His Val Tyr Asp Gly Pro Gly Pro Pro Glu Ser Ser Arg

20 25 30

Leu Leu Arg Ser Leu Thr His Phe Ser Asn Gly Lys Ala Val Thr Val
35 40 45

Glu Thr Leu Ser Gly Gln Ala Val Ser Tyr His Thr Val Ala Trp
50 55 60

Ser Asn Gly Arg Gly Phe Asn Ala Thr Tyr His Val Arg Gly Tyr Cys
65 ' 70 75 80

Leu Pro Trp Asp Arg Pro Cys Gly Leu Gly Ser Gly Leu Gly Ala Gly
85 90 95

Glu Gly Leu Gly Glu Arg Cys Tyr Ser Glu Ala Gln Arg Cys Asp Gly 100 105 110

Ser Trp Asp Cys Ala Asp Gly Thr Asp Glu Glu Asp Cys Pro Gly Cys 115 120 . 125

Pro Pro Gly His Phe Pro Cys Gly Ala Ala Gly Thr Ser Gly Ala Thr 130 135 140

Ala Cys Tyr Leu Pro Ala Asp Arg Cys Asn Tyr Gln Thr Phe Cys Ala 145 150 155 160

Asp Gly Ala Asp Glu Arg Arg Cys Arg His Cys Gln Pro Gly Asn Phe 165 170 175

| Arg | Cys | Arg | Asp 180 | Glu | Lys | Cys | Val | Туг 185 | Glu | Thr | Trp | Val | Cys 190 | Asp | Gly |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Gln | Pro | Asp 195 | Cys | Ala | Asp | Gly | Ser 200 | Asp | Glu | Trp | Asp | Cys 205 | Ser | Tyr | Val |
| Leu | Pro 210 | Arg | Lys | Val | Ile | Thr 215 | Ala | Ala | Val | Ile | Gly 220 | Ser | Leu | Val | Суѕ |
| Gly 225 | Leu | Leu | Leu | Val | 11e 230 | Ala | Leu | Gly | Суѕ | Thr 235 | Cys | Lys | Leu | Tyr | Ala 240 |
| Ile | Arg | Thr | Gln | Glu 245 | Туr | Ser | Ile | Phe | Ala 250 | Pro | Leu | Ser | Arg | Met 255 | Glu |
| Ala | Glu | Ile | Val 260 | Gln | Gln | Gln | Ala | Pro 265 | Pro | Ser | Туr | Gly | Gln 270 | Leu | Ile |
| Ala | Gln | Gly 275 | Ala | Ile | Pro | Pro | Val 280 | Glu | Asp | Phe | Pro | Thr 285 | Glu | Asn | Pro |
| Asn | Asp 290 | Asn | Ser | Val | Leu | Gly 295 | Asn | Leu | Arg | Ser | 100 300 | Leu | Gln | Ile | Leu |
| Arg 305 | Gln | Asp | Met | Thr | Pro 310 | Gly | Gly | Gly | Pro | Gly 315 | Ala | Arg | Arg | Arg | Gln 320 |
| Arg | Gly | Arg | Leu | Met 325 | Arg | Arg | Leu | Val | Arg 330 | Arg | Leu | Arg | Arg | Тгр 335 | Gly |
| Leu | Leu | Pro | Arg 340 | Thr | Asn | Thr | Pro | Ala 345 | Arg | Ala | Ser | Glu | Ala 350 | Arg | Ser |
| Gln | Val | Thr 355 | Pro | Ser | Ala | Ala | Pro 360 | Leu | Glu | Ala | Leu | Asp 365 | Gly | Gly | Thr |
| Gly | Pro 370 | Ala | Arg | Glu | Gly | Gly 375 | Ala | Val | Gly | Gly | Gln 380 | Asp | Gly | Glu | Gln |
| Ala 385 | Pro | Pro | Leu | Pro | Ile 390 | Lys | Ala | Pro | Leu | Pro 395 | Ser | Ala | Ser | Thr | Ser 400 |
| Pro | Ala | Pro | Thr | Thr 405 | Val | Pro | Glu | Ala | Pro 410 | Gly | Pro | Leu | Pro | Ser 415 | Leu |
| Pro | Leu | Glu | Pro 420 | Ser | Leu | Leu | Ser | Gly 425 | Val | Val | Gln | Ala | Leu 430 | Arg | Gly |
| Arg | Leu | Leu 435 | Pro | Ser | Leu | | Pro | Pro | Gly | Pro | Thr | Arg | Ser | Pro | Pro |

726

Gly Pro His Thr Ala Val Leu Ala Leu Glu Asp Glu Asp Asp Val Leu 455 Leu Val Pro Leu Ala Glu Pro Gly Val Trp Val Ala Glu Ala Glu Asp 470 475 Glu Pro Leu Leu Thr 485 <210> 741 <211> 313 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (6) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (7) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (9) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (36) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (276) <223> Xaa equals any of the naturally occurring L-amino acids <400> 741 Gly Gly Ala Arg Gly Xaa Xaa Arg Xaa Val Ala Ser Phe Gln Gln 10 His Gly Ala Gln Arg Asp Leu Lys Leu Gly Ser Arg Leu Tyr Gly Pro 25 Ser Ser Val Xaa Phe Ala Glu Asp Phe Val Arg Ser Ser Lys Gln His

40

45

| Tyr | Asn 50 | Cys | Glu | His | Ser | Lys 55 | Ile | Asn | Phe | Arg | Asp 60 | Lys | Arg | Ser | Ala |
|------------|------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Leu 65 | Gln | Ser | Ile | Asn | Glu 70 | Trp | Ala | Ala | Gln | Thr 75 | Thr | Asp | Gly | Lys | Leu 80 |
| Pro | Glu | Val | Thr | Lys 85 | Asp | Val | Glu | Arg | Thr 90 | Asp | Gly | Ala | Leu | Leu 95 | Val |
| Asn | Ala | Met | Phe 100 | Phe | Lys | Pro | His | Trp 105 | Asp | Glu | Lys | Phe | His 110 | His | Lys |
| Met | Val | Asp 115 | Asn | Arg | Gly | Phe | Met 120 | Val | Thr | Arg | Ser | Туг 125 | Thr | Val | Gly |
| Val | Thr 130 | Met | Met | His | Arg | Thr 135 | Gly | Leu | Tyr | Asn | Tyr 140 | туг | Asp | Asp | Glu |
| Lys 145 | Glu _. | Lys | Leu | Gln | Met 150 | Val | Glu | Met | Pro | Leu 155 | Ala | His | Lys | Leu | Ser 160 |
| Ser | Leu | Leu | Ile | Leu 165 | Met | Pro | His | His | Val 170 | Glu | Pro | Leu | Glu | Arg 175 | Leu |
| Glu | Lys | Leu | Leu 180 | Thr | Lys | Glu | Gln | Leu 185 | Lys | Ile | Trp | Met | Gly 190 | Lys | Met |
| Gln | Lys | Lys 195 | Ala | Val | Ala | Ile | Ser 200 | Leu | Pro | Lys | Gly | Val 205 | Val | Glu | Val |
| Thr | His 210 | Asp | Leu | Gln | Lys | His 215 | Leu | Ala | Gly | Leu | Gly 220 | Leu | Thr | Glu | Ala |
| 11e 225 | Asp | Lys | Asn | Lys | Ala 230 | Asp | Leu | Ser | Arg | Met 235 | Ser | Gly | Lys | Lys | Asp 240 |
| Leu | Tyr | Leu | Ala | Ser 245 | Val | Phe | His | Ala | Thr 250 | Ala | Phe | Glu | Trp | Asp 255 | Thr |
| Glu | Gly | Asn | Pro 260 | Phe | Asp | Gln | Asp | Ile 265 | Tyr | Gly | Arg | Glu | Glu 270 | Leu | Arg |
| Ser | Pro | Lys 275 | Xaa | Phe | Tyr | Ala | Asp 280 | His | Pro | Phe | Ile | Phe 285 | Leu | Val | Arg |
| Asp | Thr 290 | Gln | Thr | Gly | Ser | Leu 295 | Leu | Phe | Ile | Gly | Arg 300 | Leu | Val | Arg | Pro |
| Lys | Gly | Asp | Lys | Met | Arg | Asp | Glu | Leu | | | | | | | |

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<210> 742
<211> 60
<212> PRT
<213> Homo sapiens
<400> 742
Arg Asn Ile Lys Trp Glu Lys Ala Tyr Lys Ala Phe Arg Ile Leu Ser
Val Ser Ser Phe Leu Val Phe Arg Cys Tyr Val Ile Lys His Ile Phe
                                 25
Phe Gly Phe Pro Arg Tyr Thr Ile Tyr Leu Phe Lys Gly Lys Ser Ile
                            40
Lys Cys Ile Tyr Phe Ile Leu Trp Phe Cys Tyr Leu
     50
                       55
<210> 743
<211> 204
<212> PRT
<213> Homo sapiens
<220>
<221> SITE
<223> Xaa equals any of the naturally occurring L-amino acids
Pro Arg Gly Xaa Ser Gln Val Cys Pro Cys Ser Trp Asn Pro Gly Val
Pro Glu Ala Lys Ala Pro Pro Arg Gly Ser Arg Glu Asp Leu Val Ala
                                25
Glu Glu Ser Pro Glu Leu Leu Asn Pro Glu Pro Arg Arg Leu Ser Pro
        35
                             40
                                                 45
Glu Leu Arg Leu Pro Tyr Met Ile Thr Leu Gly Asp Ala Val His
                         55
Asn Phe Ala Asp Gly Leu Ala Val Gly Ala Ala Phe Ala Ser Ser Trp
Lys Thr Gly Leu Ala Thr Ser Leu Ala Val Phe Cys His Glu Leu Pro
```

90

729

His Glu Leu Gly Asp Phe Ala Ala Leu Leu His Ala Gly Leu Ser Val 100 105 110

Arg Gln Ala Leu Leu Asn Leu Ala Ser Ala Leu Thr Ala Phe Ala 115 120 125

Gly Leu Tyr Val Ala Leu Ala Val Gly Val Ser Glu Glu Ser Glu Ala · 130 135 140

Trp Ile Leu Ala Val Ala Thr Gly Leu Phe Leu Tyr Val Ala Leu Cys 145 150 155 160

Asp Met Leu Pro Ala Met Leu Lys Val Arg Asp Pro Arg Pro Trp Leu 165 170 175

Leu Phe Leu Leu His Asn Val Gly Leu Leu Gly Gly Trp Thr Val Leu 180 185 190

Leu Leu Ser Leu Tyr Glu Asp Asp Ile Thr Phe 195 200

<210> 744

<211> 81

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (6)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 744

Ile Thr Lys Gly Lys Xaa Val Ala Cys Ser Thr Gly Pro Glu Phe Pro 1 5 10 15

Gly Arg Pro Thr Arg Pro Thr Thr Glu Gly Tyr Gly Cys Glu Lys Thr 20 25 30

Thr Glu Gly Tyr Gly Cys Glu Lys Thr Thr Glu Gly Tyr Gly Cys Glu
35 40 45

Lys Thr Thr Glu Gly Tyr Gly Cys Glu Lys Thr Thr Glu Gly Tyr Gly
50 55 60

Cys Glu Lys Thr Thr Glu Gly Thr Ala Ala Arg Arg Arg Gln Arg Val 65 70 75 80

Arg

| <21 | 0> 7 | 45 | | | | | | | | | | | | | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| | 1> 7 | - | | | | | | | | | | | | | |
| <21 | 2> PI | RT | | | | | | | | | | | | | |
| <21. | 3> H | omo : | sapi | ens | | | | | | | | | | | |
| <40 | 0> 74 | 45 | | | | | | | | | | | | | |
| Leu 1 | Pro | Pro | Leu | Gly 5 | Ser | Pro | Gly | Pro | Ala 10 | Arg | Ser | Ala | Gly | Ser 15 | Cys |
| Ser | Val | Leu | Phe 20 | Ser | Leu | Ile | Leu | G1n 25 | Arg | Gln | Asp | Pro | Ala 30 | Pro | Ala |
| Leu | Ser | Thr 35 | Ala | Thr | Met | Gly | Lys 40 | Gly | Val | Gly | Arg | Asp 45 | Lys | Tyr | Glu |
| Pro | Ala 50 | Ala | Val | Ser | Glu | Gln 55 | Gly | Asp | Lys | Lys | Gly 60 | Lys | Lys | Gly | Lys |
| Lys 65 | Asp | Arg | Asp | Met | Asp 70 | Glu | Leu | Lys | Lys | Glu 75 | Val | Ser | Met | Asp | Asp 80 |
| His | Lys | Leu | Ser | Leu 85 | Asp | Glu | Leu | His | Arg 90 | Lys | Tyr | Gly | Thr | Asp 95 | Leu |
| Ser | Arg | Gly | Leu 100 | Thr | Ser | Ala | Arg | Ala 105 | Ala | Glu | Ile | Leu | Ala 110 | Arg | Asp |
| Gly | Pro | Asn 115 | Ala | Leu | Thr | Pro | Pro 120 | Pro | Thr | Thr | Pro | Glu 125 | Trp | Ile | Lys |
| Phe | Cys 130 | Arg | Gln | Leu | Phe | Gly 135 | Gly | Phe | Ser | Met | Leu 140 | Leu | Trp | Ile | Gly |
| Ala 145 | Ile | Leu | Cys | Phe | Leu 150 | Ala | Tyr | Ser | Ile | Gln 155 | Ala | Ala | Thr | Glu | Glu 160 |
| Glu | Pro | Gln | Asn | Asp 165 | Asn | Leu | Tyr | Leu | Gly 170 | Val | Val | Leu | Ser | Ala 175 | Val |
| Val | Ile | Ile | Thr 180 | Gly | Cys | Phe | Ser | Туг 185 | Tyr | Gln | Glu | Ala | Lys 190 | Ser | Ser |
| Lys | Ile | Met 195 | Glu | Ser | Phe | Lys | Asn 200 | Met | Val | Pro | Gln | Gln 205 | Ala | Leu | Val |
| Ile | Arg 210 | Asn | Gly | Glu | Lys | Met 215 | Ser | Ile | Asn | Ala | Glu 220 | Glu | Val | Val | Va 1 |

| Gly 225 | Asp | Leu | Val | Glu | Val 230 | Lys | Gly | Gly | Asp | Arg 235 | Ile | Pro | Ala | Asp | Leu 240 |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Arg | Ile | Ile | Ser | Ala 245 | Asn | Gly | Cys | Lys | Val 250 | Asp | Asn | Ser | Ser | Leu 255 | Thr |
| Gly | Glu | Ser | Glu 260 | Pro | Gln | Thr | Arg | Ser 265 | Pro | Asp | Phe | Thr | Asn 270 | Glu | Asn |
| Pro | Leu | Glu 275 | Thr | Arg | Asn | Ile | Ala 280 | Phe | Phe | Ser | Thr | Asn 285 | Cys | Val | Glu |
| Gly | Thr 290 | Ala | Arg | Gly | Ile | Val 295 | Val | Tyr | Thr | Gly | Asp 300 | Arg | Thr | Val | Met |
| Gly 305 | Arg | Ile | Ala | Thr | Leu 310 | Ala | Ser | Gly | Leu | Glu 315 | Gly | Gly | Gln | Thr | Pro 320 |
| Ile | Ala | Ala | Glu | Ile 325 | Glu | His | Phe | Ile | His 330 | Ile | Ile | Thr | Gly | Val 335 | Ala |
| Val | Phe | Leu | Gly 340 | Val | Ser | Phe | Phe | Ile 345 | Leu | Ser | Leu | Ile | Leu 350 | Glu | Туr |
| Thr | Trp | Leu 355 | Glu | Ala | Val | Ile | Phe 360 | Leu | Ile | Gly | Ile | 1le 365 | Val | Ala | Asn |
| Val | Pro 370 | Glu | Gly | Leu | Leu | Ala 375 | Thr | Val | Thr | Val | Cys 380 | Leu | Thr | Leu | Thr |
| Ala 385 | Lys | Arg | Met | Ala | Arg 390 | Lys | Asn | Cys | Leu | Val 395 | Lys | Asn | Leu | Glu | Ala 400 |
| Val | Glu | Thr | Leu | Gly 405 | Ser | Thr | Ser | Thr | Ile 410 | Суѕ | Ser | Asp | Lys | Thr 415 | Gly |
| Thr | Leu | Thr | Gln 420 | Asn | Arg | Met | Thr | Val 425 | Ala | His | Met | Trp | Phe 430 | Asp | Asn |
| Gln | Ile | His 435 | Glu | Ala | Asp | Thr | Thr 440 | Glu | Asn | Gln | Ser | Gly 445 | Val | Ser | Phe |
| Asp | Lys 450 | Thr | Ser | Ala | Thr | Trp 455 | Leu | Ala | Leu | Ser | Arg 460 | Ile | Ala | Gly | Leu |
| Cys 465 | Asn | Arg | Ala | Val | Phe 470 | Gln | Ala | Asn | Gln | Glu 475 | Asn | Leu | Pro | Ile | Leu 480 |
| Lys | Arg | Ala | Val | Ala 485 | Gly | Asp | Ala | Ser | Glu 490 | Ser | Ala | Leu | Leu | Lys 495 | Cys |

| Ile | Glu | Leu | Cys 500 | Cys | Gly | Ser | Val | Lys 505 | Glu | Met | Arg | Glu | Arg 510 | Tyr | Ala |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-------------------|------------|------------|
| Lys | Ile | Val 515 | Glu | Ile | Pro | Phe | Asn 520 | Ser | Thr | Asn | Lys | Туг 525 | Gln | Leu | Ser |
| Ile | His 530 | Lys | Asn | Pro | Asn | Thr 535 | Ser | Glu | Pro | Gln | His 540 | Leu | Leu | Val | Met |
| Lys 545 | Gly | Ala | Pro | Glu | Arg 550 | Ile | Leu | Asp | Arg | Cys 555 | Ser | Ser | Ile | Leu | Leu 560 |
| His | Gly | Lys | Glu | Gln 565 | Pro | Leu | Asp | Glu | Glu 570 | Leu | Lys | Asp | Ala | Phe 575 | Gln |
| Asn | Ala | Tyr | Leu 580 | Glu | Leu | Gly | Gly | Leu 585 | Gly | Glu | Arg | Val | Leu 590 | Gly | Phe |
| Cys | His | Leu 595 | Phe | Leu | Pro | Asp | Glu 600 | Gln | Phe | Pro | Glu | Gly 605 | Phe | Gln | Phe |
| Asp | Thr 610 | Asp | Asp | Val | Asn | Phe 615 | Pro | Ile | Asp | Asn | Leu 620 | Cys | Phe | Val | Gly |
| Leu 625 | Ile | Ser | Met | Ile | Asp 630 | Pro | Pro | Arg | Ala | Ala 635 | Val | Pro | Asp | Ala | Val 640 |
| Gly | Lys | Cys | Arg | Ser 645 | Ala | Gly | Ile | Lys | Val 650 | Ile | Met | Val | Thr | Gly 655 | Asp |
| His | Pro | Ile | Thr 660 | Ala | Lys | Ala | Ile | Ala 665 | Lys | Gly | Val | Gly | 11e 670 | Ile | Ser |
| Glu | Gly | Asn 675 | Glu | Thr | Val | Glu | Asp 680 | Ile | Ala | Ala | Arg | Leu 685 | Asn | Ile | Pro |
| Val | Ser 690 | Gln | Val | Asn | Pro | Arg 695 | Asp | Ala | Lys | Ala | Cys 700 | Val | Val | His | Gly |
| Ser 705 | Asp | Leu | Lys | Ąsp | Met 710 | Thr | Ser | Glu | Gln | Leu 715 | Asp | Asp | Ile | Leu | Lys 720 |
| Tyr | His | Thr | Glu | Ile 725 | Val | Phe | Ala | Lys | Thr 730 | Ser | Pro | Gln | Gln | Lys 735 | Leu |
| Ile | Ile | Val | Glu 740 | Arg | Leu | Pro | Lys | Thr 745 | Gly | Cys | Tyr | Arg | Gly 750 | Leu | |

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<211> 25
<212> PRT
<213> Homo sapiens
<220>
<221> SITE
<222> (6)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (8)
<223> Xaa equals any of the naturally occurring L-amino acids
<400> 746
Ile Pro Ala Leu Trp Xaa Ala Xaa Val Gly Arg Ser Leu Glu Pro Arg
                  5
                                     10
Ser Leu Arg Ser Ala Trp Ala Thr Trp
             20
<210> 747
<211> 37
<212> PRT
<213> Homo sapiens
<220>
<221> SITE
<222> (1)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (2)
<223> Xaa equals any of the naturally occurring L-amino acids
<400> 747
Xaa Xaa Leu Gly Gly Arg Val Cys Ser Glu Pro Arg Trp Arg His Cys
                  5
Thr Pro Ala Trp Gly Thr Glu Arg Asp Ser Ile Ser Lys Lys Lys
             20
                                 25
Lys Lys Ile Lys Asn
         35
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<211> 71
<212> PRT
<213> Homo sapiens
<220>
<221> SITE
<222> (2)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (42)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (46)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (49)
<223> Xaa equals any of the naturally occurring L-amino acids
<400> 748
Asn Xaa Ala Leu Arg Asp Asp Val Ala Ala Gly Arg Arg Leu His
Ile Lys Ala Val. Cys Gln Ser Val Arg Glu Ala Thr Thr Ala Ser Gly
             20
Gly Met Asn Ala Ala Ser Pro Arg Leu Xaa Arg His Arg Xaa Asn Gly
                             40
Xaa Tyr Phe Thr Leu Arg Glu Arg Leu Ile Thr Met Gln Lys Gln Leu
Gly Gly Asn Pro Glu Val Tyr
 65
                     70
<210> 749
<211> 109
<212> PRT
<213> Homo sapiens
<220>
<221> SITE
<222> (19)
<223> Xaa equals any of the naturally occurring L-amino acids
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<220>
<221> SITE
<222> (41)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
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<222> (43)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (59)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
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<222> (61)
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<222> (70)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (75)
<223> Xaa equals any of the naturally occurring L-amino acids
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<221> SITE
<222> (88)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (90)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (93)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (102)
<223> Xaa equals any of the naturally occurring L-amino acids
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<220> <221> SITE <222> (104) <223> Xaa equals any of the naturally occurring L-amino acids <400> 749 Gly Ile Ser Arg Lys Met Lys Ser Ser Leu Pro Gln Gly Val Arg Asn 1 5 10 15 Val Ala Xaa Val Cys Leu Gln Ile Gly Tyr Pro Thr Val Ala Ser Val 25 Pro His Ser Ile Ile Asn Gly Tyr Xaa Arg Xaa Leu Ala Leu Ser Val 40 Glu Thr Asp Tyr Thr Phe Pro Leu Ala Glu Xaa Val Xaa Ala Ser Trp 55 Leu Ile His Leu Pro Xaa Trp Leu Leu Pro Xaa Trp Leu Leu Pro Pro 70 75 Gln Leu Leu Leu Leu Leu Xaa Pro Xaa Leu Ser Xaa Asn Pro Arg 85 90 Lys Ser Glu Asp Pro Xaa Lys Xaa Trp Ile Gly Ser Leu 100 105 <210> 750 <211> 105 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (3) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (16) <223> Xaa equals any of the naturally occurring L-amino acids <400> 750 Gly Thr Xaa Gly Pro Ala Ser Gly Val Ala Gly Thr Met Gln Arg Xaa

Ser Leu Pro Phe Ala Ile Leu Thr Leu Val Asn Ala Pro Tyr Lys Arg

25

30

<221> SITE <222> (53)

Gly Phe Tyr Cys Gly Asp Asp Ser Ile Arg Tyr Pro Tyr Arg Pro Asp 40 Thr Ile Thr His Gly Leu Met Ala Gly Val Thr Ile Thr Ala Thr Val Ile Leu Val Ser Ala Gly Glu Ala Tyr Leu Val Tyr Thr Asp Arg Leu 70 75 Tyr Ser Arg Ser Asp Phe Asn Asn Tyr Val Ala Ala Val Tyr Lys Val 90 Leu Gly Thr Ser Cys Leu Gly Leu Pro 100 <210> 751 <211> 61 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (1) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (7) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (8) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (25) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (45) <223> Xaa equals any of the naturally occurring L-amino acids <220>

<223> Xaa equals any of the naturally occurring L-amino acids

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<220>
<221> SITE
<222> (59)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (60)
<223> Xaa equals any of the naturally occurring L-amino acids
<400> 751
Xaa Ser Arg Lys Pro Arg Xaa Xaa Val Thr Asp Tyr Ile Lys Val Tyr
                                     10
Tyr Thr Leu Arg Lys Gln Met Asn Xaa Asn Leu Phe Ser Ser Phe Ile
             20
                                 25
Thr Pro Thr Ile Ile Gly Leu Pro Ile Val Ile Ile Xaa Thr Met Phe
Pro Ser Ile Asp Xaa Pro Ile Thr Tyr Pro Xaa Xaa Gln
                         55
<210> 752
<211> 58
<212> PRT
<213> Homo sapiens
<220>
<221> SITE
<222> (33)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (48)
<223> Xaa equals any of the naturally occurring L-amino acids
<400> 752
Ser Asp Pro Glu Ala Glu Val Glu Ser Ser Ser Gly Leu Arg Leu
                                     10
Ser Leu Ile Lys Met Thr Thr Ser Gln Lys His Arg Asp Phe Val Ala
             20
                                 25
Xaa Pro Met Gly Glu Asn Gln Trp Gly Thr Trp Leu Gly Leu Val Xaa
                             40
         35
                                                45
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Ser Trp Ala Arg Asn Trp Lys Lys Gly Phe 50 55

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<210> 753
<211> 73
<212> PRT
<213> Homo sapiens
<220>
<221> SITE
<222> (48)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (51)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (52)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (53)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (63)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (71)
<223> Xaa equals any of the naturally occurring L-amino acids
<400> 753
Thr Leu His Ser Lys Gly Asn Lys Ser Trp Ser Ser Thr Ala Val Thr
                                     10
                                                          15
Ala Ala Leu Glu Leu Val Gly Gly Pro Val Pro Asn Ser Pro Tyr Ser
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Glu Asn Xaa Xaa Xaa Phe Arg Leu Val Cys Cys Val Glu Leu Xaa Ala

Glu Ser Tyr Tyr Asn Ser Leu Ala Val Val Leu Gln Arg Arg Asp Xaa

45

40

50 55 60 Asp Asn Asn Ser His Arg Xaa Gln Leu 65 70 <210> 754 <211> 116 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (17) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (43) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (62) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (67) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (68) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (81) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (84) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (87)

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Met Gly Ser Asp Tyr Ile Arg Glu Val Asn Val Val Lys Ser Ala Arg
                  5
                                    10
Xaa Gly Tyr Ser Lys Met Leu Leu Gly Val Tyr Ala Tyr Phe Ile Glu
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742

20 25 30 His Lys Gln Arg Asn Thr Leu Ile Trp Leu Xaa Thr Asp Gly Asp Ala 40 Arg Glu Leu Tyr Glu Lys Pro Thr Leu Ser Pro Thr Ile Xaa Asp Ile 55 Pro Ser Xaa Xaa Gly Ala Gly Pro Val Val Trp Gln Lys Ser Thr Gly 70 Xaa Asn Lys Xaa Asn His Xaa Xaa Val Ser Xaa Xaa Trp Gly Gly Pro Arg Asn Pro Ile Xaa Pro Ile Ser Xaa Trp Xaa Phe Xaa Asn Ser Xaa 105 Gly Pro Xaa Phe . 115 <210> 755 <211> 148 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (4) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (120) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (135) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (137) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE

<223> Xaa equals any of the naturally occurring L-amino acids

<222> (138)

<220> <221> SITE <222> (146) <223> Xaa equals any of the naturally occurring L-amino acids <400> 755 Ile Arg Gln Xaa Ile Asp Ile Arg Lys Asp Leu Tyr Ala Asn Asn Val Leu Ser Gly Gly Thr Thr Met Tyr Pro Gly Ile Ala Asp Arg Met Gln 20 25 Lys Glu Ile Thr Ala Leu Ala Pro Ser Thr Met Lys Ile Lys Ile Ile 40 Ala Pro Pro Glu Ala Gln Ile Leu Cys Leu Asp Arg Trp Leu His Pro 55 Gly Leu Ser Val His Leu Pro Ala Asp Val Asp Gln Gln Thr Gly Asn 65 70 75 Thr Val Lys Pro Gly Leu Pro Leu Ser Thr Ala Asn Ala Phe Leu Lys His Phe Ser Trp Phe Leu Phe Cys Leu Leu Gly Thr Gln Leu Trp Asn 105 Val Pro Val Gly Ile Tyr Gly Xaa Phe Ser Phe Phe Gln Ile Ile 115 120 125 Pro Arg Ala Lys Val Leu Xaa Trp Xaa Xaa His Gly Val Phe Leu Asn 135 140 Lys Xaa Trp Lys 145 <210> 756 <211> 151 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (147) <223> Xaa equals any of the naturally occurring L-amino acids

Ala Glu Leu Ala Thr Thr Ser Thr Met Pro Tyr Gln Tyr Pro Ala Leu

744

1 5 10 15 Thr Pro Glu Gln Lys Lys Glu Leu Ser Asp Ile Ala His Arg Ile Val 25 Ala Pro Gly Lys Gly Ile Leu Ala Ala Asp Glu Ser Thr Gly Ser Ile Ala Lys Arg Leu Gln Ser Ile Gly Thr Glu Asn Thr Glu Glu Asn Arg 50 55 Arg Phe Tyr Arg Gln Leu Leu Leu Thr Ala Asp Asp Arg Val Asn Pro Cys Ile Gly Gly Val Ile Leu Phe His Glu Thr Leu Tyr Gln Lys Ala 90 Asp Asp Gly Arg Pro Phe Pro Gln Val Ile Lys Ser Lys Gly Gly Val 100 105 Val Gly Ile Lys Val Asp Lys Gly Val Val Pro Leu Ala Gly Thr Asn 120 Gly Glu Thr Thr Gln Gly Leu Asp Gly Leu Ser Glu Arg Cys Ala 135 Gln Tyr Xaa Glu Gly Arg Ser 145 150 <210> 757 <211> 94 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (21) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (44) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (48) <223> Xaa equals any of the naturally occurring L-amino acids

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<400> 757
Phe Val Thr Ile Leu Ser Ile Ile Ile Thr Leu Phe Phe Ile Phe Gln
 1
                  5
                                      10
Leu Lys Val Ser Xaa Tyr Ser Phe Pro Glu Asn Pro Glu Pro Lys Ser
             20
                                  25
Leu Thr Thr Ser Lys Ser Thr Thr Pro Trp Arg Xaa Gln Met Asn Xaa
                             40
Asn Leu Phe Ser Ser Phe Ile Thr Pro Thr Ile Ile Gly Leu Pro Ile
     50
                         55
Val Ile Ile Ile Thr Met Phe Pro Ser Ile Ile Phe Pro Ser Pro Thr
 65
                     70
Arg Leu Ile Asn Asn Arg Leu Ile Ser Ile Xaa Thr Met Asp
                 85
<210> 758
<211> 115
<212> PRT
<213> Homo sapiens
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<222> (2)
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<223> Xaa equals any of the naturally occurring L-amino acids
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<400> 758
Arg Xaa Ala Leu Xaa Arg Leu Thr Ile Gly Xaa Ser Trp Tyr Ala Cys
Arg Tyr Arg Ser Gly Ile Pro Gly Ser Thr His Ala Ser Xaa Arg Arg
             20
Gly Gln Leu Arg Ala Arg Gly Gly Gly Ala Xaa Pro Arg Gly Ala Met
Xaa Asp Xaa Arg Ala Gly Ser Pro Arg Xaa Gly Pro Ala Ala Arg Asp
                        55
Val Ala Ala Met Ala Ser Pro Gln Leu Cys Arg Ala Leu Val Ser Ala
65
                    70 ·
                              75
```

```
Gln Trp Val Ala Glu Ala Leu Arg Ala Pro Arg Ala Gly Ala Ala Ser
                 85
                                      90
Ala Ala Xaa Arg Thr Pro Pro Gly Xaa Leu Ala Gly Ser Trp Gly Ala
            100
                                 105
Arg Thr Xaa
        115
<210> 759
<211> 44
<212> PRT
<213> Homo sapiens
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<220>
<221> SITE
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<223> Xaa equals any of the naturally occurring L-amino acids
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<222> (42)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (43)
<223> Xaa equals any of the naturally occurring L-amino acids
<400> 759
Ile Ala Xaa Gly Arg Ser Arg Gly Ser Lys Leu Thr Trp Thr Cys Met
                  5
                                                          15
Xaa Arg His Ser Ser Ser Ile Val Ser Pro Lys Phe Asn Ser Leu Ala
                                 25
Val Val Leu Gln Arg Arg Asp Trp Glu Xaa Xaa Lys
         35
                             40
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<210> 760

<211> 94

<212> PRT

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<213> Homo sapiens
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 <222> (91)
 <223> Xaa equals any of the naturally occurring L-amino acids
 Asn Asp Leu Val Glu Tyr Ser Pro Val Thr Glu Lys His Leu Thr Asp
                  5
 Gly Met Thr Val Arg Glu Leu Cys Ser Ala Ala Ile Thr Met Ser Asp
 Asn Thr Ala Ala Asn Leu Leu Thr Thr Ile Gly Gly Pro Lys Glu
                              40
 Leu Thr Ala Phe Leu His Asn Met Gly Asp His Val Thr Arg Leu Asp
                          55
 Arg Trp Glu Pro Glu Leu Asn Glu Ala Ile Pro Asn Asp Glu Arg Xaa
 Thr Thr Met Pro Val Ala Met Ala Thr Thr Xaa Ala Asn Tyr
                  85
 <210> 761
 <211> 38
 <212> PRT
 <213> Homo sapiens
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<222> (21)
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<223> Xaa equals any of the naturally occurring L-amino acids
<400> 761
Leu Gln Glu Ile Asn Arg Val Tyr Xaa Glu Met Tyr Lys Thr Asp Leu
Glu Lys Asp Ile Xaa Ser Asp Xaa Ser Gly Asp Phe Arg Lys Leu Met
             20
                                 25
Val Ala Leu Ala Lys Gly
         35
<210> 762
<211> 192
<212> PRT
<213> Homo sapiens
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<222> (4)
<223> Xaa equals any of the naturally occurring L-amino acids
<400> 762
Cys Lys Xaa Xaa Leu Pro Ser Leu Lys Gly Thr Lys Ala Gly Ala Pro
                  5
                                     10
Pro Arg Cys Gly Arg Ser Arg Thr Ser Gly Ser Pro Gly Leu Gln Glu
             20
Phe Gly Thr Ser Cys Val Gly Leu Arg Glu Ala Val Arg Ala Gly Ala
                             40
Val Gly Arg Gly Ala Glu Ala Leu Ala Arg Gly Met Ala His Cys Val
     50
Thr Leu Val Gln Leu Ser Ile Ser Cys Asp His Leu Ile Asp Lys Asp
65
                     70
Ile Gly Ser Lys Ser Asp Pro Leu Cys Val Leu Leu Gln Asp Val Gly
```

Gly Gly Ser Trp Ala Glu Leu Gly Arg Thr Glu Arg Val Arg Asn Cys

105

Ser Ser Pro Glu Phe Ser Lys Thr Leu Gln Leu Glu Tyr Arg Phe Glu 115 120 125

Thr Val Gln Lys Leu Arg Phe Gly Ile Tyr Asp Ile Asp Asn Lys Thr 130 135 140

Pro Glu Leu Arg Asp Asp Asp Phe Leu Gly Gly Ala Glu Cys Ser Leu 145 150 155 160

Gly Gln Ile Val Ser Ser Gln Val Leu Thr Leu Pro Leu Met Leu Lys 165 170 175

Leu Glu Asn Leu Leu Gly Gly Gly Pro Ser Arg Ser Gln Leu Arg Asn 180 185 190

<210> 763

<211> 103

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (96)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 763

Ser Phe Tyr Ser Ile Pro Glu Phe Asp Glu Trp Lys Lys His Ile Glu
1 5 10 15

Asn Gln Lys Ala Trp Lys Ile Lys Tyr Tyr Lys Gly Leu Gly Thr Ser 20 25 30

Thr Ala Lys Glu Ala Lys Glu Tyr Phe Ala Asp Met Glu Arg His Arg
35 40 45

Ile Leu Phe Arg Tyr Ala Gly Pro Glu Asp Asp Ala Ala Ile Thr Leu 50 55 60

Ala Phe Ser Lys Lys Ile Asp Asp Arg Lys Glu Trp Leu Thr Asn 65 70 75 80

Phe Met Glu Asp Arg Arg Gln Arg Ser Tyr Met Ala Tyr Gln Arg Xaa 85 90 95

Asp Ser Leu Ser Thr Gln Thr

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<210> 764
<211> 105
<212> PRT
<213> Homo sapiens
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<400> 764
Val Phe Ser Pro Thr Gly Ser Asp Gly Pro Leu Ala Thr Ser Lys Pro
                                    10
Val Pro Ala Glu Lys Ser Gly Leu Pro Val Gly Pro Glu Asn Gly Val
             20
Glu Leu Ser Lys Glu Glu Leu Ile Arg Arg Lys Arg Glu Glu Phe Ile
                             40
Gln Lys His Gly Arg Gly Met Glu Lys Ser Asn Lys Ser Thr Lys Ser
                        55
Asp Ala Pro Lys Glu Lys Gly Lys Lys Ala Pro Arg Val Trp Glu Leu
 65
                    70
Gly Gly Cys Ala Asn Lys Glu Met Leu Asp Tyr Ser Thr Ser Thr Thr
Asn Gly Thr Pro Xaa Ala Cys Leu Val
            100
                                105
<210> 765
<211> 147
<212> PRT
<213> Homo sapiens
<400> 765
Gly Arg Glu Thr Met Phe Arg Ala Ala Pro Gly Gln Leu Arg Arg
 1
Ala Ala Ser Leu Leu Arg Phe Gln Ser Thr Leu Val Ile Ala Glu His
             20
Ala Asn Asp Ser Leu Ala Pro Ile Thr Leu Asn Thr Ile Thr Ala Ala
                             40
```

752

Thr Arg Leu Gly Gly Glu Val Ser Cys Leu Val Ala Gly Thr Lys Cys 50 55 60

Asp Lys Val Ala Gln Asp Leu Cys Lys Val Ala Gly Ile Ala Lys Val 65 70 75 80

Leu Val Ala Gln His Asp Val Tyr Lys Gly Leu Leu Pro Glu Glu Leu 85 90 95

Thr Pro Leu Ile Leu Ala Thr Gln Lys Gln Phe Asn Tyr Thr His Ile 100 105 110

Cys Ala Gly Ala Ser Ala Phe Gly Lys Asn Leu Leu Pro Arg Val Ala 115 120 125

Ala Lys Leu Glu Val Ala Pro Ile Ser Asp Ile Ile Ala Ile Lys Ser 130 135 140

Pro Asp Thr

145

<210> 766

<211> 36

<212> PRT

<213> Homo sapiens

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<221> SITE

<222> (18)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 766

Gly Arg Glu Ala Glu Ala Xaa Gln Leu Glu Ser Ser Lys Arg Phe Ala 1 5 10 15

Lys Xaa Phe Met Asp Arg His Gly Ile Pro Thr Ala Gln Trp Glu Gly
20 25 30

Phe His Gln Thr

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<210> 767
<211> 105
<212> PRT
<213> Homo sapiens
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<400> 767
Arg Phe Ala Leu Ser Thr Lys Ile Pro Asp Thr Lys Gly Cys Leu Gln
                                    10
Cys Arg Val Val Arg Asn Pro Tyr Thr Gly Ala Thr Phe Leu Leu Ala
             20
                                25
Ala Leu Pro Thr Ser Leu Leu Leu Gln Trp Tyr Glu Pro Leu Gln
                             40
Lys Phe Leu Leu Lys Asn Phe Ser Ser Pro Leu Pro Xaa Pro Ala
                        55
Gly Met Leu Xaa Pro Leu Val Leu Asp Gly Lys Glu Leu Pro Gln Xaa
                                        75
65
                    70
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Phe Phe Gly Ala Glu Gly Pro Lys Gly Pro Gly Cys Arg Phe Leu Phe 85 90 95

Gln Xaa Leu Xaa Leu Gly Gly Trp Xaa 100 105

<210> 768

<211> 154

<212> PRT

<213> Homo sapiens

<400> 768

Val Thr Leu Thr Gln Cys Ser Glu Lys Leu Val Gln Leu Ile Leu His
1 5 10 15

Glu Tyr Lys Ile Phe Asn Ala Glu Val Leu Phe Arg Glu Asp Cys Ser 20 25 30

Pro Asp Glu Phe Ile Asp Val Ile Val Gly Asn Arg Val Tyr Met Pro 35 40 45

Cys Leu Tyr Val Tyr Asn Lys Ile Asp Gln Ile Ser Met Glu Glu Val 50 60

Asp Arg Leu Ala Arg Lys Pro Asn Ser Val Val Ile Ser Cys Gly Met 65 70 75 80

Lys Leu Asn Leu Asp Tyr Leu Leu Glu Met Leu Trp Glu Tyr Leu Ala 85 90 95

Leu Thr Cys Ile Tyr Thr Lys Lys Arg Gly Gln Arg Pro Asp Phe Thr 100 105 110

Asp Ala Ile Ile Leu Arg Lys Gly Ala Ser Val Glu His Val Gly Thr 115 120 125

Ser Thr Lys Tyr Ser Pro Gln Arg Val Gly Leu Thr His Thr Met Glu 130 135 140

His Glu Asp Val Ile Gln Ile Val Lys Lys 145 150

<210> 769

<211> 89

<212> PRT

<213> Homo sapiens

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<221> SITE
<222> (84)
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<400> 769
Asn Gln Ala Gly Leu Thr Ala Asp Arg Met Leu Val Leu Ser Arg Ala
                                      10
Gly Gln Ala Ala Gly Leu Thr Phe Asn Gln Thr Ser Glu Ser Leu Ser
Ala Leu Val Lys Ala Gly Val Ser Gly Gļu Ala Gln Ile Ala Ser Ile
         35
                             40
                                                 45
Ser Gln Ser Val Ala Arg Phe Xaa Ser Ala Ser Gly Val Glu Val Asp
                         55
Lys Val Val Glu Ala Phe Glu Gly Gly Pro Tyr Pro Phe Ala Tyr Ser
               . 70
                                        75
Lys Arg Ile Xaa Ile Ile Ala Val Phe
                 85
<210> 770
<211> 85
<212> PRT
<213> Homo sapiens
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<221> SITE
<222> (57)
<223> Xaa equals any of the naturally occurring L-amino acids
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<221> SITE
<222> (79)
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<221> SITE
<222> (83)
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<223> Xaa equals any of the naturally occurring L-amino acids

<220> <221> SITE <222> (84) <223> Xaa equals any of the naturally occurring L-amino acids Gln Thr Ser Arg Ala Glu Ser Ala Ser Met Thr Glu Arg Arg Val Pro 10 Phe Ser Leu Leu Arg Gly Pro Ser Trp Asp Pro Phe Arg Asp Trp Tyr 25 Pro His Ser Arg Leu Phe Asp Gln Ala Phe Gly Leu Pro Arg Leu Pro 40 Glu Glu Trp Ser Gln Trp Leu Gly Xaa Ser Ser Trp Pro Gly Tyr Val 55 60 Arg Pro Leu Pro Pro Ala Ala Ser Arg Ala Pro Gln Trp Pro Xaa Pro 75 Leu Gln Xaa Xaa Ala 85 <210> 771 <211> 76 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (48) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (50) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (70) <223> Xaa equals any of the naturally occurring L-amino acids <400> 771 Asp Tyr Cys Gln Val Val Arg Pro Ser Pro Ser Gly Glu Thr Ile Thr Tyr Arg Gln Val Val Leu Ser Val Asn Val Lys Ser Pro Ala Leu Leu

20 25 30

Leu Ser Gln Leu Leu Pro Tyr Met Glu Asn Lys Lys Gly Ala Val Xaa 35 40 45

Leu Xaa Ser Ser Ile Ala Ala Tyr Asn Pro Val Val Ala Leu Gly Val 50 55 60

Tyr Asn Val Ser Lys Xaa Glu Leu Leu Gly Ser His 65 70 75

<210> 772

<211> 105

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (12)

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<400> 772

Gly Ala Glu Glu Gly Arg Gln Glu Ala Gln Gly Xaa Arg Lys Glu Ser 1 5 · 10 15

Tyr Ser Val Tyr Val Tyr Lys Val Leu Lys Gln Val His Pro Asp Thr 20 25 30

Gly Ile Ser Ser Lys Ala Met Gly Ile Met Asn Ser Phe Val Asn Asp 35 40 45

Ile Phe Glu Arg Ile Ala Gly Glu Ala Ser Arg Leu Ala His Tyr Asn 50 55 60

Lys Arg Ser Thr Ile Thr Ser Arg Glu Ile Gln Thr Ala Val Arg Leu 65 70 75 80

Leu Leu Pro Gly Glu Leu Ala Lys His Ala Val Ser Glu Gly Thr Lys 85 90 95

Ala Val Thr Lys Tyr Thr Ser Ala Lys 100 105

<210> 773

<211> 144

<212> PRT

<213> Homo sapiens

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<222> (140)
<223> Xaa equals any of the naturally occurring L-amino acids
<220>
<221> SITE
<222> (141)
<223> Xaa equals any of the naturally occurring L-amino acids
<400> 773
Phe Ala His Leu Pro Lys Ser Thr Phe Val Leu Asp Glu Phe Lys Arg
                                    10
Lys Tyr Ser Asn Glu Asp Thr Leu Ser Val Ala Leu Pro Tyr Phe Trp
                                              . 30
             20
                                 25
Glu His Phe Asp Lys Asp Gly Trp Ser Leu Trp Tyr Ser Glu Tyr Arg
                             40
Phe Pro Glu Glu Leu Thr Gln Thr Phe Met Ser Cys Asn Leu Ile Thr
                         55
                                             60
Gly Met Phe Gln Arg Leu Asp Lys Leu Arg Lys Asn Ala Phe Ala Ser
65
                    70
                                         75
Val Ile Leu Phe Gly Thr Asn Asn Ser Ser Ser Ile Ser Gly Val Trp
                 85
                                     90
Val Xaa Pro Gly Gln Glu Leu Ala Phe Pro Leu Ser Pro Asp Trp Gln
            100
                                105
Val Asp Tyr Glu Val Ile His Met Ala Glu Thr Gly Ser Gly Lys Arg
        115
                            120
                                               125
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Gly Asp Pro Xaa Ala Gly Ser Arg Val Leu Xaa Xaa Xaa Arg Gly Pro 130 135 140

<210> 774 <211> 64 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (7) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (56) <223> Xaa equals any of the naturally occurring L-amino acids Ile Arg His Glu Arg Glu Xaa Glu Gln Gly Val Tyr Thr Cys Thr Ala 10 Gln Gly Ile Trp Lys Asn Glu Gln Lys Gly Glu Lys Ile Pro Arg Cys 25 Leu Pro Val Cys Gly Lys Pro Val Asn Pro Val Glu Gln Arg Gln Arg 35 40 Ile Ile Gly Gly Gln Lys Ala Xaa Gly Ile Val Gly Ala Phe Leu Gln 50 55

<210> 775

<211> 69

<212> PRT

<213> Homo sapiens

<400> 775

Asn Ile Ser Asn Ser Gln Val Asn Arg Leu Arg His Phe Val Arg Ala 1 5 10 15

Gly Leu Arg Ser Leu Phe Arg Pro Glu Pro Gln Thr Ala Val Glu Trp

20 25 30 Ala Asp Ala Asn Tyr Tyr Leu Pro Lys Glu Ser Ala Tyr Gln Glu Gly 35 40 Arg Trp Glu Thr Leu Pro Phe Gin Arg Ala Ile Met Asn Ala Asn Gly 55 Gln Arg Leu His Pro 65 <210> 776 <211> 56 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (5) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (15) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (31) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (54) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (55) <223> Xaa equals any of the naturally occurring L-amino acids Glu Arg Val Phe Xaa Pro His Gly Leu Ile Met Asp Arg Thr Xaa Arg Phe Ala Arg Asn Val Met Lys Glu Met Gly Gly His His Ile Xaa Val

25

Leu Phe Leu Leu Lys Gly Gly Tyr Lys Phe Phe Ala Asp Leu Leu Asp

WO 00/55173 PCT/US00/05881

761

35 40 45

Tyr Ile Lys Gly Leu Xaa Xaa Lys 50 55

<210> 777

<211> 134

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (4)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (5)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (6)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 777

Leu Gln Phe Xaa Xaa Xaa Met Ile Thr Pro Ser Ser Asn Thr Thr His

1 10 15

Tyr Arg Glu Ser Trp Tyr Ala Cys Arg Tyr Arg Ser Gly Ile Pro Gly
20 25 30

Ser Thr His Ala Ser Gly Val Phe Glu Val His Lys Lys Asn Val Arg
35 40 45

Gly Glu Phe Thr Tyr Tyr Glu Ile Gln Asp Asn Thr Gly Lys Met Glu
50 60

Val Val His Gly Arg Leu Thr Thr Ile Asn Cys Glu Glu Gly Asp
65 70 75 80

Lys Leu Lys Leu Thr Cys Phe Glu Leu Ala Pro Lys Ser Gly Asn Thr 85 90 95

Gly Glu Leu Arg Ser Val Ile His Ser His Ile Lys Val Ile Lys Thr
100 105 110

Arg Lys Asn Lys Lys Asp Ile Leu Asn Pro Asp Ser Ser Met Glu Thr 115 120 125

Ser Pro Asp Phe Phe Phe 130

<210> 778

<211> 133

<212> PRT

<213> Homo sapiens

<400> 778

Thr Ile Thr Ser Gly Gly Asn Pro Pro Ala Phe Ser Leu Thr Pro Asp 1 5 10 15

Gly Lys Leu Thr Ala Lys Asn Ala Asp Ile Ser Gly Ser Val Asn Ala 20 25 30

Asn Ser Gly Thr Leu Ser Asn Val Thr Ile Ala Glu Asn Cys Thr Ile 35 40 45

Asn Gly Thr Leu Arg Ala Glu Lys Ile Val Gly Asp Ile Val Lys Ala 50 60

Ala Ser Ala Ala Phe Pro Arg Gln Val Glu Ser Ser Val Asp Trp Pro 65 70 75 80

Ser Gly Thr Arg Thr Val Thr Val Thr Asp Asp His Pro Phe Asp Arg 85 90 95

Gln Ile Val Val Leu Pro Leu Thr Phe Arg Gly Ser Lys Arg Thr Val

Ser Gly Arg Thr Thr Tyr Ser Met Cys Tyr Leu Lys Val Leu Met Asn 115 120 125

Gly Ala Val Ile Tyr 130

<210> 779

<211> 90

<212> PRT

<213> Homo sapiens

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<222> (52)

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Pro Asn Thr Ala Leu Val Gly Val Gln Val Asp Ser Glu Gln Phe Gly
Ser Gln Gln Val Ser Arg Asn Tyr His Leu Arg Gly Arg Ile Leu Gln
                                  25
Val Pro Ser Asn Tyr Asn Pro Gln Thr Arg Gln Tyr Ser Gly Ile Trp
                             40
Asp Gly Thr Xaa Lys Pro Ala Tyr Ser Asn Asn Met Ala Trp Xaa Leu
     50
                         55
Trp Asp Met Leu Thr His Pro Arg Tyr Gly Met Gly Lys Arg Leu Gly
                     70
                                          75
Ala Ala Asp Val Asp Lys Trp Ala Leu Tyr
                 85
<210> 780
<211> 82
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<400> 780
Val Xaa Arg Ala Ser Asp Asp Ala Glu Gly Tyr Leu Asp Xaa Phe Lys
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                                     10
                                                          15
Gly Lys Ile Thr Glu Ser His Leu Xaa Lys Glu Leu Leu Glu Lys Val
                                 25
Glu Leu Thr Glu Asp Asn Ala Ser Arg Leu Glu Glu Phe Ser Lys Xaa
                             40
Trp Lys Asp Ala Ser Xaa Lys Trp Asn Ala Met Trp Ala Xaa Lys Ile
     50
                         55
                                              60
Xaa Gln Thr Lys Asp Xaa Lys Arg Xaa Leu Phe Cys Tyr Leu Val Val
65
                     70
                                          75
Arg Ser
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<210> 781

<211> 49

<212> PRT

<213> Homo sapiens

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765

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Pro Asp Phe His Arg Glu Asp Asp Trp Trp Arg Asn Gly Gln Asn Leu
Tyr Leu Asp Asn Leu Glu Ala Thr Gly Leu Tyr Gln Val Pro Leu Ser
                                 25
Ala Ala Gln Pro Gly Asp Val Leu Leu Cys Xaa Phe Gly Ser Ser Xaa
                             40
                                                 45
Xaa
<210> 782
<211> 85
<212> PRT
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Xaa Lys Glu Asn Gly Thr Val Thr Ala Ala Asn Ala Ser Thr Leu Asn
                  5
                                     10
Asp Gly Ala Ala Ala Leu Val Leu Met Thr Ala Asp Ala Ala Xaa Arg
             20
                                 25
                                                      30
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<223> Xaa equals any of the naturally occurring L-amino acids

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Leu Asn Val Thr Pro Leu Ala Arg Ile Val Ala Phe Ala Asp Ala Ala
         35
                             40
Val Glu Pro Ile Asp Phe Pro Ile Ala Pro Val Tyr Ala Ala Ser Met
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                         55
                                             60
Val Leu Lys Asp Val Gly Leu Lys Lys Glu Asp Ile Ala Met Trp Glu
                     70
                                         75
Val Asn Gly Ser Leu
<210> 783
<211> 90
<212> PRT
<213> Homo sapiens
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<400> 783
Gly Lys Ser Pro Ala Ser Trp Trp Gly Ser Ala Gly His Xaa Xaa Xaa
Pro Cys Arg Gly Ala Cys Ala Ala Ala Gly Xaa Thr Ala Xaa Arg Gly
             20
                  . 25
Phe Ala Val Ser Ala Arg Xaa Val Trp Gln Thr Xaa Asp Arg Pro Gly
        35
                             40
Thr Trp Asp Gln Ser Arg Asn Leu Leu Leu Asn Gly Lys Ser Xaa Pro
                        55
Thr Lys Val Arg Leu Ile Trp Gly Gly Ser Leu Pro Pro Val Lys Arg
65
                     70
                                         75
Xaa Ala Asp Glu Leu Asp Xaa Arg Pro Gly
                 85
<210> 784
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<223> Xaa equals any of the naturally occurring L-amino acids

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WO 00/55173

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Ala Leu Leu Gly Leu Thr Ile Xaa Lys Ala Gly Thr Pro Ala Gly Thr
                                     10
Gly Pro Glu Phe Pro Gly Arg Pro Thr Arg Pro Leu Leu Cys Leu Glu
          . 20
                                 25
Gly Ile Ile Leu Ser Leu Phe Val Ile Ile Thr Ile Thr Ile Leu Ile
         35
                             40
                                                 45
Asn His Leu Thr Leu Ala Ser Ile Thr Pro Ile Ile Leu Leu Val Xaa
                         55
Ala Ala Cys Glu Ala Xaa Leu Gly Leu Ile Pro Phe Ser Tyr Xaa Leu
65
                     70
                                         75
Xaa Tyr Ile Arg
<210> 785
<211> 61
<212> PRT
<213> Homo sapiens
<400> 785
Ile Gly Phe Asp Asn Lys Lys Asp Leu Leu Ile Ser Val Gly Asp Leu
                  5
Val Asp Arg Gly Ala Glu Asn Val Glu Cys Leu Glu Leu Ile Thr Phe
```

```
Pro Trp Phe Arg Ala Val Arg Gly Asn His Glu Gln Met Met Ile Asp
                              40
Gly Leu Ser Glu Arg Gly Asn Val Asn His Trp Leu Leu
                         55
<210> 786
<211> 102
<212> PRT
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Gly Leu Gln Pro Tyr Cys Tyr Xaa Thr Trp Arg Cys Arg Cys Thr Thr
1
                                     10
Gly Gln Pro Gly Thr Ala Pro Ala Gly Thr Pro Gly Ala Pro Pro Leu
```

Xaa Gly Met Ala Ile Val Lys Glu Glu Glu Thr Glu Ala Ala Ile Gly
35 40 45

Ala Pro Pro Thr Ala Thr Glu Gly Pro Glu Thr Lys Pro Val Leu Xaa 50 55 60

Ala Leu Glu Glu Gly Pro Gly Ala Glu Gly Ser Arg Leu Asp Ser Leu 65 70 75 80

Val Ala Xaa Xaa Leu Xaa Leu Glu Val Val Ala Leu Arg Asp Ser Ala 85 90 95

Pro Val Leu Ala Gly Thr 100

<210> 787

<211> 64

<212> PRT

<213> Homo sapiens

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<221> SITE

<222> (48)

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<400> 787

Cys Leu Xaa Arg Ala Arg Xaa Pro Ala Ala Ala Asn Ser Ser Gly Asp 1 5 10 15

Gly Gly Ala Ala Gly Asp Gly Thr Val Val Asp Cys Pro Val Cys Lys
20 25 30

Gln Gln Cys Phe Ser Lys Asp Ile Val Glu Asn Xaa Phe Met Arg Xaa 35 40 45 Ser Gly Ser Lys Ala Ala Thr Asp Ala Gln Asp Ala Asn Gln Cys Cys 50 60

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<210> 788
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<212> PRT
<213> Homo sapiens

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<400> 788
Thr Leu Ala Phe Phe Leu Ile Pro Cys Ile Gly Ser Pro Ala Cys Pro
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Thr Met Ser Asp Ala Ala Val Asp Thr Ser Ser Glu Ile Thr Thr Lys
20 25 30

Asp Leu Lys Glu Lys Lys Glu Val Leu Glu Arg Gly Arg Lys Trp Lys
35 40 45

Arg Arg Pro Xaa Leu Thr Gly Asn Ala Asn Leu Gly Lys 50 60

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<210> 789
<211> 69
<212> PRT
<213> Homo sapiens

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Ala Gln Asp Asn Phe Lys His Leu Asn Gly Ile Xaa Leu Phe His Cys
1 5 10 15
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Ile Asp Pro Asn Gly Ser Lys His Lys Arg Thr Asp Arg Ser Ile Leu

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Cys Cys Leu Arg Lys Gly Glu Ser Gly Gln Ser Trp Gln Gly Leu Thr 40 Lys Glu Arg Ala Lys Leu Asn Trp Leu Ser Val Asp Phe Asn Asn Trp 55 Glu Arg Leu Gly Arg 65 <210> 790 <211> 51 <212> PRT <213> Homo sapiens <220> <221> SITE <222> (22) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (24) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (35) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (41) <223> Xaa equals any of the naturally occurring L-amino acids Gln Ser Thr Val Lys Leu Glu His Ala Lys Ser Val Ala Ser Arg Ala 5 10 Thr Val Leu Gln Lys Xaa Ser Xaa Thr Pro Val Gly Met Phe Leu Lys Leu Asn Xaa Met Asn Val Lys Phe Xaa Ser Gly Tyr Tyr Glu Leu Pro 40 45 Cys Arg Ser

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<210> 791
<211> 154
<212> PRT
<213> Homo sapiens
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Asp Pro Gln Ala His Val Ala Met Leu Ser Ser Thr Ala Met Tyr Ser
                                   10
Ala Pro Gly Arg Asp Leu Gly Met Glu Pro His Arg Ala Ala Gly Pro
                               25
Leu Gln Leu Arg Phe Ser Pro Tyr Val Phe Asn Gly Gly Thr Ile Leu
                           40
Ala Ile Ala Gly Glu Asp Phe Ala Ile Val Ala Ser Asp Thr Arg Leu
Ser Glu Gly Phe Ser Ile His Thr Arg Asp Ser Pro Lys Xaa Tyr Lys
65 . 70 75
Leu Thr Asp Lys Thr Val Ile Gly Cys Ser Gly Phe His Gly Asp Cys
                85
Leu Thr Leu Thr Lys Ile Ile Glu Ala Arg Leu Lys Met Tyr Lys His
                              105
Ser Asn Asn Lys Ala Met Thr Thr Gly Ala Ile Ala Ala Met Leu Ser
       115
                           120
                                             125
Thr Ile Leu Tyr Ser Arg Arg Phe Phe Pro Tyr Tyr Val Tyr Asn Ile
                       135
Ile Gly Gly Leu Asp Glu Glu Gly Lys Gly
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<210> 792 <211> 96 <212> PRT <213> Homo sapiens <220> <221> SITE

<222> (72)

WO 00/55173

<223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (73) <223> Xaa equals any of the naturally occurring L-amino acids <220> <221> SITE <222> (74) <223> Xaa equals any of the naturally occurring L-amino acids Gly Thr Ala Ser Thr Ala Met Tyr Ser Ala Pro Gly Arg Asp Leu Gly Met Glu Pro His Arg Ala Ala Gly Pro Leu Gln Leu Arg Phe Ser Pro 25 Tyr Val Phe Asn Gly Gly Thr Ile Leu Ala Ile Ala Gly Glu Asp Phe 40 Ala Ile Val Ala Ser Asp Thr Arg Leu Ser Glu Gly Phe Ser Ile His Thr Arg Asp Ser Pro Lys Cys Xaa Xaa Xaa Asn Arg Gln Asn Ser His 70 Trp Met Gln Arg Phe Ser Trp Arg Leu Ser Tyr Ala Asp Lys Asp Tyr 85 90

<210> 793 <211> 72

<212> PRT

<213> Homo sapiens

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<400> 793

Arg Pro Pro Val Arg Xaa Phe Leu Arg Asp Phe Phe Met Ser Met Tyr

1 5 10 15

Thr Thr Ala Gln Leu Leu Ala Ala Asn Glu Gln Lys Phe Lys Phe Asp

20 . 25 . 30

Pro Leu Phe Leu Arg Leu Phe Phe Arg Glu Ser Tyr Pro Phe Thr Thr 35 40 45

Glu Glu Ser Leu Ser Leu Thr Asn Ser Gly Thr Gly Lys His Gly Ala
50 60

Val Arg Phe Ala Asp Cys Phe Arg 65 70

<210> 794

<211> 124

<212> PRT

<213> Homo sapiens

<400> 794

Gly Ser Gly Asp His Glu Gly Gly Lys Gly Asp Gly Met Glu Glu Val 1 5 10 15

Pro His Asp Cys Pro Gly Ala Asp Ser Ala Gln Ala Gly Arg Gly Ala 20 25 30

Ser Cys Gln Gly Cys Pro Asn Gln Arg Leu Cys Ala Ser Gly Ala Gly 35 40 45

Ala Thr Pro Asp Thr Ala Ile Glu Glu Ile Lys Glu Lys Met Lys Thr 50 60

Val Lys His Lys Ile Leu Val Leu Ser Gly Lys Gly Gly Val Gly Lys
65 70 75 80

Ser Thr Phe Ser Ala His Leu Ala His Gly Leu Ala Glu Asp Glu Asn $85 \hspace{1cm} 90 \hspace{1cm} 95$

Thr Gln Ile Ala Leu Leu Asp Ile Asp Ile Cys Gly Pro Ser Ile Pro 100 105 110

Lys Ile Met Gly Leu Glu Gly Glu Gln Val His Gln 115 120

<210> 795

<211> 144

<212> PRT

<213> Homo sapiens

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Ala Arg Xaa Trp Leu Xaa Gly Val Thr Phe Xaa Val Thr Thr Val Xaa
Thr Lys Xaa Arg Thr Glu Xaa Val Gln Lys Leu Cys Pro Gly Gln Gln
             20
                                 25
                                                     30
Xaa Pro Phe Leu Leu Tyr Xaa Thr Glu Val His Thr Asp Thr Asn Lys
         35
Xaa Ala Glu Phe Leu Xaa Ala Val Leu Cys Pro Pro Arg Tyr Pro Xaa
                         55
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Leu Ala Ala Leu Asn Pro Xaa Ser Asn Thr Ala Xaa Leu Xaa Ile Phe

Lys Val Ser Leu Arg Arg Ser Kaa Trp Ile Ala Arg Ala His Pro Gly

140

135

<210> 796
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<212> PRT
<213> Homo sapiens

<220>
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Ile Met Lys Asn Gly Phe Tyr Ala Thr Tyr Arg Ser Lys Asn Lys Gly
1 5 10 15

Lys Asp Lys Arg Ser Ile Asn Leu Ser Val Phe Leu Asn Ser Xaa Leu 20 25 30

Ala Asp Asn His His Leu Gln Val Gly Ser Asn Tyr Leu Tyr Ile His
35 . 40 45

Lys Ile Asp Gly Lys Thr Phe Leu Phe Thr Lys Thr Asn Asp Lys Ser 50 55 60

Leu Val Gln Lys Ile Asn Arg Ser Lys Ala Ser Val Glu Asp Ile Lys 65 70 75 80

Asn Ser Leu Val Asp Asp Gly Ile Ile Gly Ile Pro Ile Phe Phe Val 85 90 95

| <21 | 0> 7 | 97 | | | | | | | | | | | | | |
|--------------------|-----------|----------|----------|------|------|------|-----|------|--------|------|----------|------|------|------|------------|
| <21 | 1> 1 | 81 | | | | | | | | | | | | | |
| <21 | <212> PRT | | | | | | | | | | | | | | |
| <213> Homo sapiens | | | | | | | | | | | | | | | |
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| <221> SITE | | | | | | | | | | | | | | | |
| | 2> (| | | | | | | | | | | | | | |
| | | | qual | s an | y of | the | nat | ural | ly o | ccur | ring | L-a | mino | acio | ds |
| | | | - | | | | | | - | | _ | | | | |
| <220> | | | | | | | | | | | | | | | |
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| <22 | 3> X | aa e | qual: | s an | y of | the | nat | ural | ly o | ccur | ring | L-ai | nino | acio | ds |
| | | | | | | | | | | | | | | | |
| | 0> 7 | | | | | | | | | | | | | | |
| Arg | Xaa | Xaa | Pro | Ser | Leu | Lys | Gly | Thr | Lys | Ala | Gly | Ala | Pro | Pro | Arc |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| _ | | _ | _ | _ | | | | | | | | | | | _ |
| Cys | Gly | Arg | | Arg | Thr | Ser | Gly | | Pro | Gly | Leu | Gln | | Phe | Gl |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| n L | | 5 | a | | | | _ | | | _ | _ | _ | | • | |
| rnr | Arg | | ser | Arg | Leu | Arg | | Thr | Arg | Lys | Leu | | GIY | His | Val |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| cor | uic | Clu | uic | Gly | 7 | T10 | C1 | T | e1 d _ | 3 | T | ** - | D | C1 | ~1. |
| Jer | 50 | GIY | 1112 | Gry | nr 9 | 55 | GIĀ | гåз | urs | ALG | 60 60 | nıs | PIO | GIY | GL |
| | 30 | | | | | " | | | | | 00 | | | | |
| Ara | Glv | Asn | Ala | Gly | Glv | T.en | Hie | His | His | Ara | Tle | Aen | Phe | Acn | f.vc |
| 65 | 017 | | | 011 | 70 | 200 | | | | 75 | 110 | ng. | 1110 | пор | 80 |
| • | | | | | | | | | | | | | | | • |
| rvr | His | Pro | Gly | Tyr | Phe | Glv | Lvs | Val | Glv | Met | Lvs | His | Tvr | His | Lei |
| • | | | - | 85 | | 4 | -1- | | 90 | | -1- | | -1- | 95 | |
| | | | | • | | | | | | | | | | _ | |
| Lys | Arg | Asn | Gln | Ser | Phe | Cys | Pro | Thr | Val | Asn | Leu | Asp | Lys | Leu | Trp |
| • | | | 100 | | | - | | 105 | | | | • | 110 | | ٠ |
| | | | | | | | | | | | | | | | |
| Chr | Leu | Val | Ser | Glu | Gln | Thr | Arg | Val | Asn | Ala | Ala | Lys | Asn | Lys | Thr |
| | | 115 | | | | | 120 | | | | | 125 | | - | |
| | | | | | | | | | | | | | | | |
| Sly | Ala | Ala | Pro | Ile | Ile | Asp | Val | Val | Arg | Ser | Gly | Tyr | Tyr | Lys | Val |
| | 130 | | | | | 135 | | | | | 140 | _ | _ | _ | |
| | | | | | | | | | | | | | | | |
| Leu | Gly | Lys | Gly | Lys | Leu | Pro | Lys | Gln | Pro | Val | Ile | Val | Lys | Ala | Lys |
| 45 | | | | | 150 | | | | | 155 | | | | | 160 |
| | | | | | | | | | | | | | | | |
| he | Phe | Ser | Arg | Arg | Ala | Glu | Glu | Lys | | Lys | Ser | Val | Gly | Gly | Ala |
| | | | | 165 | | | | | 170 | | | | | 176 | |

Cys Val Leu Val Ala 180

<210> 798

<211> 136

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (29)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 798

Trp Ile Pro Arg Ala Ala Gly Ile Arg His Glu Arg Lys Glu Gly Trp 1 5 10 15

Arg Glu Glu Lys Gly Pro Phe Cys His Gln Arg Arg Xaa Thr Arg Glu 20 25 30

Tyr Thr Ile Asn Ile His Lys Arg Ile His Gly Val Gly Phe Lys Lys
35 40 45

Arg Ala Pro Arg Ala Leu Lys Glu Ile Arg Lys Phe Ala Met Lys Glu 50 60

Met Gly Thr Pro Asp Val Arg Ile Asp Thr Arg Leu Asn Lys Ala Val 65 70 75 80

Trp Ala Lys Gly Ile Arg Asn Val Pro Tyr Arg Ile Arg Val Arg Leu 85 90 95

Ser Arg Lys Arg Asn Glu Asp Glu Asp Ser Pro Asn Lys Leu Tyr Thr 100 105 110

Leu Val Thr Tyr Val Pro Val Thr Thr Phe Lys Ile Ser Val Leu Asn 115 120 125

Ser Val Thr Val Ala Lys Ser Pro 130 135

<210> 799

<211> 142

<212> PRT

<213> Homo sapiens

<400> 799

Trp Ile Pro Arg Ala Ala Gly Ile Arg His Glu Ala Ala Leu Ala Ala l 1 15 15

Cys Ala Ala Met Ala Lys Ile Lys Ala Arg Asp Leu Arg Gly Lys Lys
20 25 30

Lys Glu Glu Leu Leu Lys Gln Leu Asp Asp Leu Lys Val Glu Leu Ser 35 40 45

Gln Leu Arg Val Ala Lys Val Thr Gly Gly Ala Ala Ser Lys Leu Ser 50 55 60

Lys Ile Arg Val Val Arg Lys Ser Ile Ala Arg Val Leu Thr Val Ile
65 70 75 80

Asn Gln Thr Gln Lys Glu Asn Leu Arg Lys Phe Tyr Lys Gly Lys Lys 85 90 95

Tyr Lys Pro Leu Asp Leu Arg Pro Lys Lys Thr Arg Ala Met Arg Arg 100 105 110

Arg Leu Asn Lys His Glu Glu Asn Leu Lys Thr Lys Lys Gln Gln Arg 115 120 125

Lys Glu Arg Leu Tyr Pro Leu Arg Lys Tyr Ala Val Lys Ala 130 135 140

<210> 800

<211> 74

<212> PRT

<213> Homo sapiens

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Arg Gly Val Xaa Met Asn Pro Val Glu His Pro Phe Gly Gly Asn
                                 25
His Gln His Ile Gly Lys Pro Ser Thr Ile Arg Arg Asp Ala Pro Ala
                             40
Gly Arg Lys Val Gly Leu Ile Ala Ala Xaa Xaa Gly Xaa Leu Xaa
    50
                         55
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Gly Thr Lys Xaa Val Gln Glu Lys Glu Asn 70

<210> 801

<211> 100

<212> PRT

<213> Homo sapiens

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<220>

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<222> (49)

<223> Xaa equals any of the naturally occurring L-amino acids

<400> 801

Met Thr Pro Val Gln Arg Gly Gly Pro Gly Ala Xaa Val Ala Leu Gly

Trp Gly Thr Ala Val Ala Ser Ala Arg Phe Arg Gln Trp His Pro Gly 20 25

Pro Gly Ser Arg Pro Trp Thr Gly Pro Gly Pro Arg Pro Arg Thr Arg

Xaa Gly Lys Ala Glu Asp Lys Glu Trp Met Pro Val Thr Lys Leu Gly 50 55

Arg Leu Val Lys Asp Met Lys Ile Lys Ser Leu Glu Glu Ile Tyr Leu

Phe Ser Leu Pro Ile Lys Glu Ser Glu Ile Ile Asp Ser Ser Trp Gly 90

Leu Ser Gln Gly 100

<210> 802

<211> 19

<212> PRT

<213> Homo sapiens

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Xaa Glu Thr Gln Ala Ile Val Cys Gln Gln Leu Asp Leu Thr His Leu
                                     10
Lys Gly Ala
<210> 803
<211> 54
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Gly Thr Arg Asp Val Arg Arg Val Pro Gly Val Ala Pro Thr Leu Val
                                     10
Arg Ser Ala Ser Glu Thr Ser Glu Lys Arg Pro Phe Met Cys Ala Tyr
             20
                                 25
Pro Gly Cys Asn Lys Arg Tyr Phe Lys Leu Ser His Leu Gln Met His
                             40
Ser Arg Xaa Ala His Trp
     50
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Phe Lys Ser Tyr Leu Gly Asp Thr Ile Glu Gly Ser Leu Gln Val Thr
Gly Pro Glu Ile Pro Gly Ser Thr His Ala Ser Ala Glu Ser Leu Ser
                                 25
Arg Arg Lys Leu Asp Thr Gly Thr Gly Ser Ala Met Arg Leu Leu Pro
                             40
Arg Leu Leu Leu Leu Leu Leu Val Phe Pro Ala Thr Val Leu Phe
                         55
Arg Gly Gly Pro Arg Gly Leu Leu Ala Val Ala Gln Asp Leu Thr Glu
Asp Glu Glu Thr Val Glu Asp Ser Ile Ile Glu Asp Glu Asp Asp Glu
                 85
Ala Xaa Val Glu Glu Asp Glu Xaa Thr Asp Phe Val Glu Asp Lys Glu
Glu Glu Asp Val Ser Gly Glu Xaa Glu Thr Leu Pro Ser Ala Asp Thr
                            120
Thr Ile Leu Phe Leu Lys Xaa Xaa Ile Phe Arg Gln
    130
                       135
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<210> 805

<211> 130

<212> PRT

<213> Homo sapiens

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Asn His

<210> 806

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<211> 35
<212> PRT
<213> Homo sapiens
<400> 806
Val Ala Asp Ile Ala Trp Trp Phe Arg Arg Ile Phe Ile Ala Val
Leu Arg Cys Asn Ser Ser Ile Ser Asp Ala Glu Ser Met Met Ser Ala
             20
Ile Phe His
<210> 807
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<222> (68)
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Asp Trp Arg Gln Thr Ser Xaa Ser Gly Ala His Gly Arg Leu Lys Pro
                  5
                                     10
Trp Xaa Asn Pro Xaa Ala Arg Arg Asp Ala Arg Glu Asp Arg Ala Thr
Trp Lys Ser Asn Tyr Xaa Leu Lys Ile Xaa Gln Arg Ile Gly Met Ile
                             40
Ile Leu Lys Trp Val Xaa Leu Val Gly Ser Glu Tyr Xaa Met Val Gly
     50
                         55
                                             60
Xaa Pro Xaa Xaa Ser Met Ala Ser
 65
                     70
<210> 808
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<212> PRT
<213> Homo sapiens
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Pro Ser Leu Lys Gly Thr Lys Ala Gly Asn Asp Leu Val Ser Leu Arg
Ala Ala Arg Thr Leu Arg Pro Pro Gly Thr Lys Pro Gly Xaa Gly Ala
             20
                                 25
Thr Phe Gly Pro Gly Leu Ser Glu Arg Ala Ser Ala Gln Arg Gly Ser
                             40
Gly Gln Leu Xaa His
     50
<210> 809
<211> 70
<212> PRT
<213> Homo sapiens
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Thr Ser Gly Pro Gly Cys Xaa Cys Gln Gly Gly Leu Ser Asp Leu Arg
Met Gly Xaa Met Glu Trp Xaa Arg Arg Asp Ala Gly Val Xaa Ala Gly
Xaa Asp Arg Ser Xaa Thr His Glu Cys Gln Val Gln Val Val Arg Val
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Gly Asp Met Ser Leu Glu
 65
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<211> 39
<212> PRT
<213> Homo sapiens
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<400> 810
Xaa Ile Xaa Xaa Cys Gly Phe Glu Pro Pro His Phe Leu Thr Leu Asn
                  5
                                     10
Leu Xaa Met His Arg Xaa Ser Cys Pro Leu Asp Cys Lys Val Tyr Val
                                 25
Gly Ile Leu Gly Thr Met Xaa
         35
<210> 811
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<212> PRT
<213> Homo sapiens
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Lys Lys Lys Lys Xaa Pro Xaa Xaa Gly Pro 20 25

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<210> 812
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<211> 72

<212> PRT

<213> Homo sapiens

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<223> Xaa equals any of the naturally occurring L-amino acids

<400> 812

Arg Arg Arg Xaa Arg Pro Ala Pro Pro Pro Gly Ala Cys Leu His Leu 1 5 10 15

Arg Leu Pro Lys Xaa Leu Gly Gln Arg Leu Asp Ala Arg His Gln Gly
20 25 30

Pro Val Glu Val Leu Gln Glu Glu Arg Arg Pro Arg Pro Arg Leu Pro 35 40 45

Arg Pro Ala Leu Ala Thr Leu Ser Ala Arg Phe Thr Asn Lys Leu Ser 50 55 60

Asp Pro Lys Lys Lys Lys Lys Lys 65 70

<210> 813

<211> 27

<212> PRT

<213> Homo sapiens

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Asn Ser Ala Xaa Xaa Lys Lys Lys Lys Lys Lys Lys Lys Lys
Lys Lys Lys Lys Lys Lys Lys Lys Lys
           20
<210> 814
<211> 23
<212> PRT
<213> Homo sapiens
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<400> 814
10
Lys Lys Lys Lys Lys Xaa
           20
<210> 815
<211> 46
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Asn Ser Ala Xaa Leu Lys Gln Thr Gly Leu Lys Gly Val Thr Phe Asn
Lys Arg Met Lys Met Xaa Lys Lys Lys Lys Lys Lys Lys Lys Lys
Lys Lys Lys Lys Lys Lys Lys Xaa Pro Gly Gly Xaa Pro Pro Pro
         35
                             40
                                                45
Pro Xaa Pro Pro
     50
<210> 817
<211> 113
<212> PRT
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Xaa Ser Gly Arg Gly Gly Ser His Ser Arg Asn Leu Val Leu Phe Phe
                  5
                                     10
Pro Gln Leu Gly Lys Arg His Met Ser Leu Ala Xaa Pro Ile Ala Asn
                                 25
Pro Val Val Gly Phe Leu Ala Tyr Ser Arg Pro Ser Val Leu Pro Gly
                             40
Trp His Arg Pro His Arg Thr Ser Arg Val Gly Leu Ser Gly Ser Ser
     50
Thr Ala Gly Xaa Xaa Asn Ser Arg Phe Gly Gly Cys Ser Phe Gln Ala
 65
Gly Asp Thr Leu Gly Pro Val Val Arg Ser Pro Val Leu Arg His Leu
                 85
Val Trp Asn Xaa Arg Leu Ala Val Ser Ile Gly Val Gly Xaa Cys Ala
            100
                                105
Ala
<210> 818
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<212> PRT
<213> Homo sapiens
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                 5
                                    10
Asn Gln Asn Gln Asn Pro Xaa Gln Ser Ile Xaa Lys Ser Lys Pro Gly
                                25
Gln Asn Gln Asn Glu Xaa Xaa Lys Gln Ser Lys Ser Ser Gln Lys Gln
                            40
Lys Pro Lys Cys Arg Tyr Arg Xaa Xaa Val Gly Asp Gln Ala Thr Leu
                        55
Pro Leu Lys Trp Ser Gly Xaa Xaa Pro Lys Thr Ser Xaa Thr Xaa Phe
Xaa Xaa Ser Gly Xaa Gln Xaa Pro Val Pro Ser Gln Xaa Xaa Ala Ala
                 85
                                    90
Xaa Leu Ile Leu Cys Gly Gly Leu Xaa Asn Ala Xaa Leu Ala Arg Cys
Ser Thr Gly Xaa Ile Ala Tyr Pro Xaa Val Leu Ser Gly Ser Xaa Ser
                           120
Leu Lys Leu Ala
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<211> 62
<212> PRT
<213> Homo sapiens
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Gln Thr Thr Arg Gln Leu Leu Lys Pro Ala Ile His Val Tyr Phe Asn
           20
                             25
Lys Lys Lys Lys Xaa Xaa Gly Gly Pro Pro Pro
                       55
<210> 820
<211> 40
<212> PRT
<213> Homo sapiens
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<400> 820
Asp His Thr Ser Asp Thr Xaa Ala Trp Val Thr Glu Arg Asp Ser Val
Xaa Gly Lys Glu Lys Lys Lys Lys Xaa Xaa Gly Gly Ala Pro Val
             20
                                25
Pro Asn Trp Pro Tyr Xaa Gly Ser
        35
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<211> 64
<212> PRT
<213> Homo sapiens
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Ala Xaa Pro Thr Gln Gln Ser Phe Pro Gln Leu Pro Arg Arg Lys Gly
                 5
                                                         15
                                     10
Pro Ser Trp Val Trp Asp His Lys Gly Gly Asp Cys Thr Pro Leu Pro
            20
                                 25
Leu Gly Pro Gly Cys Gly Gln Arg Pro Pro Cys Val Ser Arg Val Thr
                             40
Val Pro Leu Ser Cys Asp Ala Ile Ser Val Cys Ala Trp Ser Pro Gln
    50
                        55
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803

<210> 822 <211> 61

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His Leu Cys Phe Lys Trp Gly Ser Pro Cys Arg Gly Phe Ile Gly His
Trp Leu Ser Lys Cys Gln Xaa Trp Ala Gly Gly Gly Thr Glu Pro Pro
                                25
Gln His Cys Ala Leu Val Glu Lys Ala Leu Thr Cys His Ala Pro Leu
                             40
Lys Pro Pro Leu Leu Thr Cys Leu Leu His Pro Ser His
     50
                         55
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<212> PRT
<213> Homo sapiens
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Thr Ala Gly Arg Trp Pro Trp Lys Ser Glu Ser Ala Lys Glu Cys Val
                                                         15
                                     10
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Thr Thr His Leu Pro Asn Gln Leu Ala Leu Lys Met Asp Gly Ala Gly
20 25 30

Ala Ser Gly Pro Tyr Pro Ser Val Ala Gly Ser Arg Glu Trp Thr Gly
35 40 45

Xaa Ala Gly Ala Ala Arg Ala Arg Xaa Val Met Val Cys Val Gly Gly 50 55 60

Arg Arg Arg Arg Gly Cys Xaa Val 65 70

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<400> 824

Pro Arg Xaa Arg Arg Gln Gln Gln Pro His His Xaa Val Ala Asp Gly
1 5 10 15

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Pro Leu

805

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807

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Asn Val Lys Leu His Cys Ser Gln Arg Phe Xaa Leu Leu Ser Thr Ala 35 40 45

Ile Asn His Gly His Ser Pro Xaa Asn Ile Ile Phe Phe Leu Leu Lys 50 55 60

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<210> 829

<211> 89

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35 40 45

Ala Gln Val Leu Leu Ile Glu Ala Gln Pro Val Asp Gly Val Arg Pro 50 55 60

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809

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810

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811

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Gly Thr Ala Ala Arg Arg Gln Lys Gly Thr Ala Ala Arg Arg Arg 35 40 45

Gln Lys Val Arg Leu Arg Glu Asp Asp Arg Arg Ile Arg Leu Arg Glu
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ceaegectee egtgetggae teegaegget eettetteet etacageaag eteaeegtgg 600
acaagagcag gtggcagcag gggaacgtct tctcatgctc cgtgatgcat gaggctctgc 660
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 gcccctaact ccgcccatt ccgcccatt tccgccccat ggctgactaa tttttttat 180
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| | | | | | | | |

International application No. PCT/US00/05881

| A. CLASSIFICATION OF SUBJECT MATTER IPC(7) : C07H 21/04; C07K 5/04, 16/00; G01N 33/53 US CL : 536/23.1; 530/300, 387.9; 436/501 | | | | | | | |
|--|--|-----------|-------------------------|------|---|--|--|
| According t | According to International Patent Classification (IPC) or to both national classification and IPC | | | | | | |
| | LDS SEARCHED | 11. 1 | | | | | |
| U.S. : | Minimum documentation searched (classification system followed by classification symbols) U.S.: 536/23.1; 530/300, 387.9; 436/501 | | | | | | |
| Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched . | | | | | | | |
| Electronic d | Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) | | | | | | |
| East, GenEmbl, EST, GeneSeq, PIR-63, SwissProt, SPTREMBL, Issued patents sequence database: SEQ ID NO:1 and monoamine adj oxidase | | | | | | | |
| c. Doc | UMENTS CONSIDERED TO BE RELEVANT | | | | | | |
| Category* | Citation of document, with indication, where appropriate, of the relevant passages | | | | Relevant to claim No. | | |
| X Y | ZHU et al. Promoter organization and activity of human monoamine oxidase (MOA) A and B genes. J. Nuerosci. November 1992, Vol. 12, No. 11, pages 4437-4446, especially pages 4438-4439. | | | 992, | 1-12, 14-16, 20- 23 13, 17-19 | | |
| X Y | CHEN et al. The deduced amino acid sequences of human platelet and frontal cortex monoamine oxidase B are identical. J. Neurochem. July 1993, Vol. 61, No. 1, pages 187-190, especially pages 188-190. | | | J. | 1-7, 11-12 19 | | |
| X Y | GRIMSBY et al. Human monoamine of identical exon-intron organization. Pro May 1991, Vol. 88, pages 3637-3641, | roc. Natl | . Acad. Sci., U | | 1-12, 20-21 and 23 | | |
| X Further documents are listed in the continuation of Box C. See patent family annex. | | | | | | | |
| Special categories of cited documents: T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand to be of particular relevance *A* document defining the general state of the art which is not considered to be of particular relevance *T* Later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention T | | | | | ication but cited to understand | | |
| *E* earlier document published on or after the international filing date *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) *Y* document of particular relevance; the claimed invention cannot considered novel or cannot be considered to involve an inventive when the document of particular relevance; the claimed invention cannot considered novel or cannot be considered to involve an inventive when the document of particular relevance; the claimed invention cannot considered novel or cannot be considered to involve an inventive when the document of particular relevance; the claimed invention cannot considered novel or cannot be consi | | | | | ed to involve an inventive step claimed invention cannot be | | |
| ED. | document referring to an oral disclosure, use, exhibition or other combined with one or more other such documents, such combination being obvious to a person skilled in the ert | | | | | | |
| *P* document published prior to the international filing date but later than *g * document member of the same patent family the priority date claimed | | | | | | | |
| Date of the actual completion of the international search 01 JUNE 2000 Date of mailing of the international search report 05 JUL 2000 | | | гев героп | | | | |
| Commissioner of Patents and Trademarks Box PCT | | | d officer ORIE MORAN | PAR | OYCE BRIDGERS NLEGAL SPECIALIST IEMICAL MATRIX | | |
| Washington, D.C. 20231 Facsimile No. (703) 305-3230 | | | No. (703) 308-12 | | 110 | | |

International application No.
PCT/US00/05881

| | 1 | | |
|-------------|--|----------------------|--------------------------|
| C (Centinua | tion). DOCUMENTS CONSIDERED TO BE RELEVANT | | |
| Category* | Citation of document, with indication, where appropriate, of the relevan | Relevant to claim No | |
| X Y | BACH et al. cDNA cloning of human liver monoamine oxidase A and B: Molecular basis of differences in enzymatic properties. Proc. Natl. Acad. Sci., USA. July 1988, Vol. 85, pages 4934-4938, especially pages 4935-4936. | | 1-16, 20-23 17-19 |
| Y | US 5,783,680 A (BRUNNER et al.) 21 July 1998, columns 5-15. | | 13, 17-19 |
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International application No. PCT/US00/05881

| Box I Observations where certain claims were found unsearchable (Continuation of Item 1 of first sheet) |
|---|
| This international report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons: |
| 1. Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely: |
| 2. Claims Nos.: because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically: |
| 3. Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a). |
| Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet) |
| This International Searching Authority found multiple inventions in this international application, as follows: |
| Please See Extra Sheet. |
| |
| 1. As all required additional search fees were timely paid by the applicant, this international search report covers all searchabl claims. |
| 2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite paymer of any additional fee. |
| 3. As only some of the required additional search fees were timely paid by the applicant, this international search report cover only those claims for which fees were paid, specifically claims Nos.: |
| 4. X No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims: it is covered by claims Nos.: 1-23, SEQ ID NO:1 |
| Remark on Protest The additional search fees were accompanied by the applicant's protest. No protest accompanied the payment of additional search fees. |

International application No. PCT/US00/05881

BOX !!. OBSERVATIONS WHERE UNITY OF INVENTION WAS LACKING This ISA found multiple inventions as follows:

This application contains the following inventions or groups of inventions which are not so linked as to form a single inventive concept under PCT Rule 13.1. In order for all inventions to be searched, the appropriate additional search fees must be paid.

Group I, claim(s)1-10 and 21, drawn to isolated nucleic acid sequences, a gene, a recombinant vector and host cells comprising the sequences.

Group II, claim(s) 11-12 and 14, drawn to an isolated polypeptide and a recombinant host cell expressing the polypeptide.

Group III, claim(s) 13, drawn to an antibody.

Group IV, claim(s)15-16, drawn to a method of making a polypeptide and the polypeptide made.

Group V, claim(s) 17, drawn to a method of preventing, treating, or ameliorating a medical condition by administering a polypeptide or a polynucleotide.

Group VI, claim(s) 18, drawn to a method of diagnosis using a polynucleotide.

Group VII, claim(s) 19, drawn to a method of diagnosis using a polypeptide.

Group VIII, claim(s) 20 and 23, drawn to a method of identifying a binding partner to a polypeptide.

Group IX, claim(s) 22, drawn to a method of identifying biological activity.

In addition, each isolated nucleic acid represented by SEQ ID NO: X is a separate product, not necessarily related to any other nucleic acid represented by SEQ ID NO: X. Each polypeptide is likewise considered a separate product, not necessarily related to any other polypeptide sequence, or to any nucleotide sequence. Applicant is required to elect either ten nucleic acid sequences or one polypeptide sequence for search.

The inventions listed as Groups I-IX do not relate to a single inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: every nucleic acid sequence claimed is not unique (SEQ ID NO: 1 is not unique, see the Search report), and therefore does not represent a special technical feature. As the nucleic acid would be the "linking" feature, and the nucleic acid is not a special technical feature, the claims do not relate to a single inventive concept. Because there is no single inventive concept, a method of use is not included with the nucleic acids of Group I.

Although unity of invention is lacking for Groups I-IX, as previously set forth, no invitation to pay for a search for extra groups has been made. However, unity of invention is also lacking with regard to sequences and applicant was invited to pay for a search for additional groups of sequences. Applicant elected only SEQ ID NO:1, therefore no extra search fees are due.